San Francisco
Medical Center
LIBRARY
UNIVERSITY OF CALIFORNIA

San Francisco
Medical Center
LIBRARY
UNIVERSITY OF CALIFORNIA

Digitized by the Internet Archive
in 2016 with funding from
The National Endowment for the Humanities and the Arcadia Fund

https://archive.org/details/michiganmedicine701unse

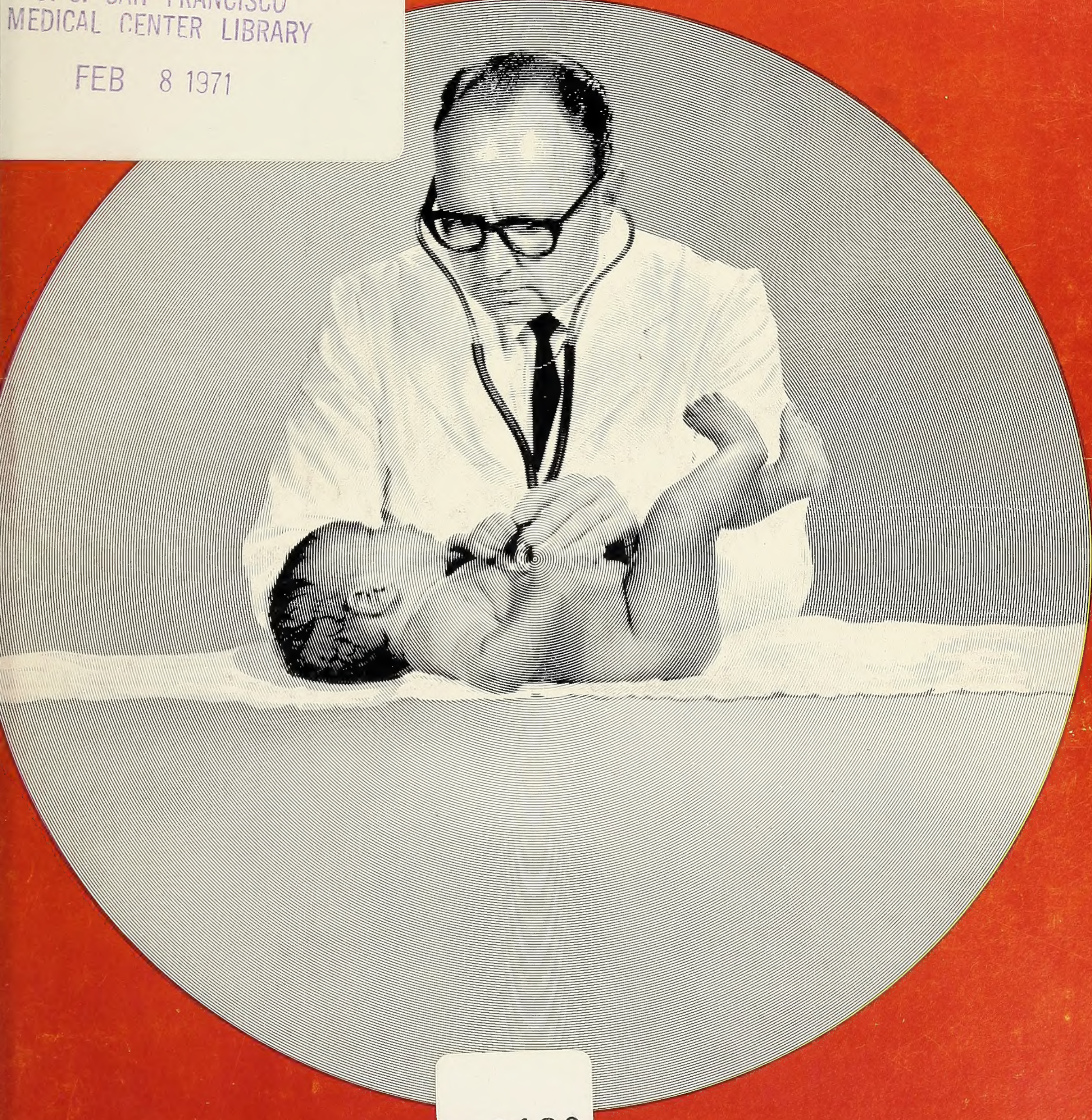
INSIDE:

The medical journal: patterns of use and evaluation

The role of the medical school in determining the nature of health care

Michigan Medicine

U. C. SAN FRANCISCO
MEDICAL CENTER LIBRARY
FEB 8 1971



268180

Mark your calendar now for 1971 MSMS Conference on Maternal and Perinatal Health, April 14-15, Lansing

Menrium® treats the menopausal symptoms that bother him most.

ROCHE
Roche
LABORATORIES
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

His wife has a lot of different enopausal symptoms, but only a few eally irritate *him*. Her hot flashes, her ertigo, her palpitations—that's *her* roblem. What really bothers him is er nervousness, her irritability and er excessive anxiety, often expressed y endless "book-shuffling, chain-moking, reading-lamp" insomnia!

Menrium takes care of hot flashes, ertigo, palpitations in most enopausal women. Menrium rovides the well-known antianxiety ction of chlordiazepoxide (Librium®) nd water-soluble esterified estrogens. t therefore relieves more symptoms han either component separately. t takes care of the vasomotor ymptoms as well as the emotional ymptoms. This means the symptoms hat bother his wife most. And the ymptoms that irritate him most.

So, to help them both get through *er* menopause, remember Menrium.

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Management of manifestations generally associated with the menopausal syndrome—anxiety and tension, vasomotor complaints and hormonal deficiency states.

Contraindications: Women with cancer of breast or genitalia, except inoperable cases, and those with known hypersensitivity to chlordiazepoxide and/or esterified estrogens.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. As with all CNS-acting drugs, caution patients against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Exclude other possible causes of menopausal syndrome manifestations, such as pregnancy. Though physical and psychological dependence have rarely been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions) similar to those seen with barbiturates have been reported following discontinuance of chlordiazepoxide HCl. Potential benefits of use in pregnancy, lactation or women of childbearing age should be weighed against possible hazards to mother and child. Clinical data inadequate on safety in pregnancy.

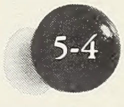
Precautions: In elderly and debilitated patients, limit dosage to smallest effective amount of chlordiazepoxide (initially 10 mg or less per day) to preclude ataxia or oversedation; increase gradually as needed and tolerated. Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects—particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in patients with impaired renal or hepatic function. Paradoxical reactions to chlordiazepoxide (*e.g.*, excitement, stimulation and acute rage) have been reported in psychiatric patients. Employ usual precautions in the treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation very rarely reported in patients receiving Librium® (chlordiazepoxide) and oral anticoagulants.

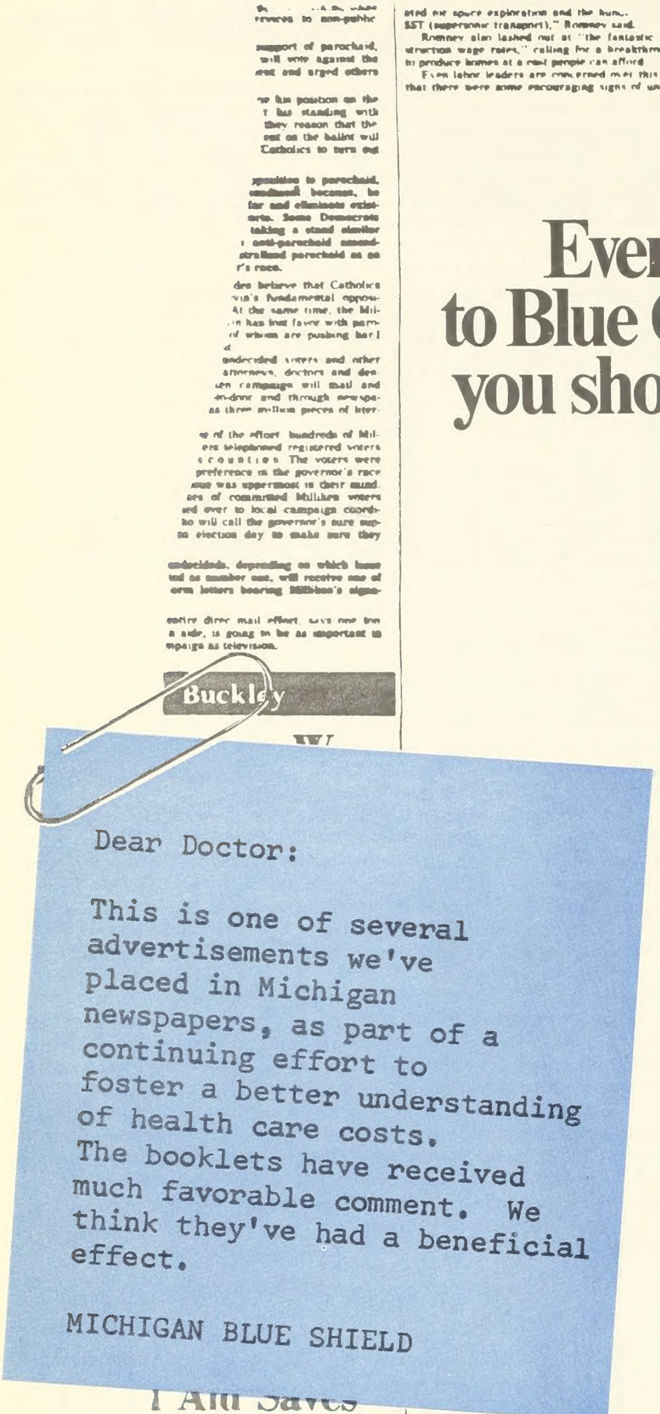
Adverse Reactions: Untoward effects seen with either compound alone may occur with Menrium. With chlordiazepoxide, drowsiness, ataxia and confusion reported in some patients, particularly in the elderly and debilitated; while usually avoided by proper dosage adjustment, these are occasionally observed at lower dosage ranges. Also reported have been a few instances of syncope; isolated occurrences of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido, and occasional reports of blood dyscrasias, including agranulocytosis, jaundice and hepatic dysfunction. Periodic blood counts and liver function tests advisable during protracted treatment. Changes in EEG patterns (low-voltage fast activity) observed during and after chlordiazepoxide treatment.

With estrogens, headache, nausea and vomiting, anorexia, gastrointestinal discomfort, dysuria and urinary frequency, jitteriness, breast engorgement, formation of breast cysts, skin rashes and pruritus occasionally seen. Administration may also be associated with uterine bleeding and/or followed by withdrawal bleeding.

Usual Dosage: One tablet t.i.d. for 21 days, followed by one-week rest periods.

Menrium® T.I.D.

5 mg chlordiazepoxide		**0.2 mg water-soluble esterified estrogens**
5 mg chlordiazepoxide		**0.4 mg water-soluble esterified estrogens**
10 mg chlordiazepoxide		**0.4 mg water-soluble esterified estrogens**



reverses to non-public

support of parochaid, will vote against the and urged others

his position on the has standing with they reason that the on the ballot will Catholics to turn out

opposition to parochaid, because, he far and eliminate existents. Some Democrats taking a stand similar anti-parochaid amendstrallied parochaid as an r's race.

believe that Catholics fundamental opposi-. At the same time, the Mil- has lost favor with par- of whom are pushing hard

undecided voters and other attorneys, doctors and den- campaign will mail and door and through newspa- as three million pieces of liter-

of the effort hundreds of Mil- telephoned registered voters counties. The voters were preference in the governor's race was uppermost in their mind. of committed Milliken voters over to local campaign coordi- who will call the governor's sure sup- on election day to make sure they

undecideds, depending on which issue as number one, will receive one of letters bearing Milliken's signa-

entire direct mail effort, says one top aide, is going to be as important as campaign as television.

Buckley

Dear Doctor:

This is one of several advertisements we've placed in Michigan newspapers, as part of a continuing effort to foster a better understanding of health care costs. The booklets have received much favorable comment. We think they've had a beneficial effect.

MICHIGAN BLUE SHIELD

ated on space exploration and the hum SST (supersonic transport)," Romney said.

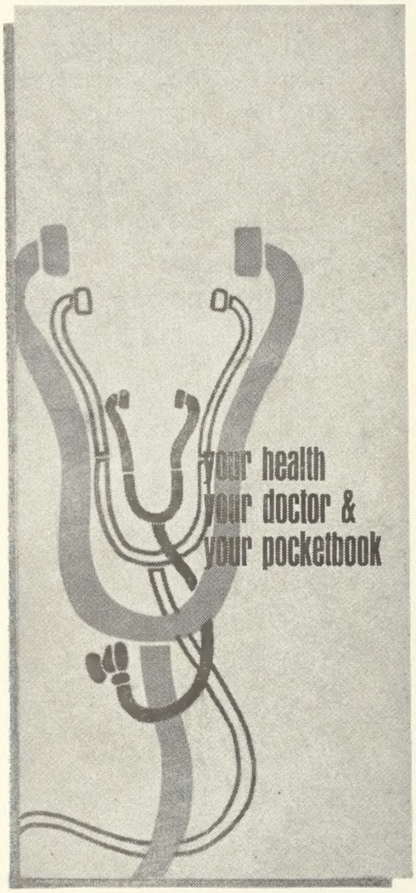
Romney also lashed out at "the fantastic increase in construction wage rates," calling for a breakthrough in this area to produce homes at a cost people can afford.

Even labor leaders are concerned over this, he said, adding that there were some encouraging signs of union co-operation.

CLIP THIS COUPON & BRING IN

Good at all Detroit and surrounding Suburban Stores, plus Port Huron, Pontiac, Ann Arbor, Ypsilanti, Mt. Clemens and Rochester Kentucky Fried Chicken take-homes.

Even if you don't belong to Blue Cross and Blue Shield, you should have a copy of this



ger Railways

railroads that will be operating passenger under contract with the new company, National Railroad Passenger Corporation.

government is expected to announce in what trains it wants to keep oper-. Final decision on routes and schedules be made in January. It is believed that will be furnished between major cities more than 200 miles apart and also be- New York and Miami, between Chicago New Orleans, and on three routes be- the Midwest and the West Coast.

many of the railroads need reorganization and are not able to their securities in the market because lack of confidence among investors in future of train service. Costs for wages, and supplies have risen in recent years have unmatched the crisis that the com- faces.

On the whole, if this is "nationalization" of

Some things people do and some that they don't can contribute to the high cost of health care.

That's why Michigan Blue Cross and Blue Shield have put together a folder called *Your health, your doctor and your pocketbook*. It's free for the asking. The folder shows ways you can benefit from today's high standards of health care and how you can enlist in the fight against rising costs. It supplements efforts by doctors, hospitals and Blue Cross and Blue Shield to avoid waste and improve efficiency.

Today's health care is better than ever. Let's all work together and help hold the cost down.

Pick up your free copy of "Your health, your doctor and your pocketbook" at any Michigan Blue Cross and Blue Shield office.

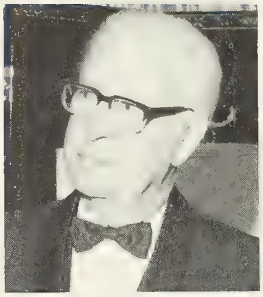
Copies are also available from most participating doctors and hospitals.

Help us Help you

MICHIGAN BLUE CROSS AND BLUE SHIELD

President's Page

MSMS Requesting Permission to Intervene In Important Malpractice Court Case


H. H. Hiscock, M.D.
MSMS President

One of the phenomena of the expanding medical horizons in the 1960s was the burgeoning of medical malpractice litigation. The MSMS officers, staff, and particularly The Council, share your grave concern over the seeming exploitation of our profession by patients not satisfied with results and the increasing trend towards liability without fault.

A recent Michigan Supreme Court decision of great interest is *Naccarato* v. *Grob and Krevsky*. Without here attempting to review all facets of that case, it suffices to say that the Supreme Court has ruled that the defendant doctors were guilty of malpractice for failing, in 1959 and 1960, to utilize ferric chloride tests for PKU and appropriate diet treatment. This case is treated elsewhere in this issue by MSMS's attorney.

At the trial, two experts from distant places were allowed to testify as to how this infant should have been handled, although their knowledge of the Michigan standards of practice, at that time, was admittedly almost zero. As you know, in 1959 or 1960 medical literature on the subject of ferric chloride tests and dietary control was available, but the benefits and side effects were not well established.

We have always understood that in Michigan malpractice litigation, the doctor must have been shown to have violated the standard of care for medical practice in that community or similar communities and under the same approximate circumstances.

The *Naccarato* case seems to imply that if there is knowledge in existence anywhere as to forms of medical treatment which may be beneficial, it becomes the duty of the Michigan doctor to utilize that procedure, failing of which the doctor is guilty of malpractice.

This is worrisome because as doctors we sometimes "know" of procedures elsewhere which are said to be beneficial but we may not have seen them in use or they may not have been sufficiently tested to satisfy us.

This is not to say we condone the failure to utilize up-to-date information or that we justify the professional existence of a few doctors who may fail to keep up with the latest developments.

But we do deplore a court ruling which leaves it to a lay jury to decide when research and new techniques have progressed to the point where the individual practitioner should have adopted them, or failing to do so, practices at his peril. It is at once apparent that we are dramatically more vulnerable to malpractice suits than we realize.

As the Michigan Supreme Court has already decided this case, the hour is late. We are told that the lawyer for the losing doctors is attempting to get this case reheard. On that basis, The MSMS Council has authorized its attorneys to request permission of the Court to allow MSMS to intervene in the case and file an *amicus curiae* brief. Hopefully, this will give the Court a broader perspective of the very real effect that this unfortunate decision will have on the delivery of medical care in this state.

(This article was written for the President's Page by MSMS Legal Counsel A. Stewart Kerr, at the invitation of President Hiscock.)

You know diuretics medically.

Short-acting diuretics may create abrupt, inconvenient waves of diuresis.
Long-acting Hygroton offers a gentle flow rather than abrupt diuresis.
It's smooth acting.
In edema and hypertension.

Hygroton® chlorthalidone USP

Makes water, not waves.

But have you met them socially?
LADIES

Electrolyte imbalance may occur when using diuretics. Hygroton is contraindicated in severe renal or hepatic diseases and, of course, if it causes hypersensitivity. Carefully supervise those who may be receiving other antihypertensives.

Hygroton® chlorthalidone USP *Indications:* Hypertension and many types of edema involving retention of salt and water. *Contraindications:* Hypersensitivity and most cases of severe renal or hepatic diseases. *Warnings:* With the administration of enteric-coated potassium supplements, which should be used only when adequate dietary supplementation is not practical, the possibility of small-bowel lesions (obstruction, hemorrhage, and perforation) should be kept in mind. Surgery for these lesions has been required frequently and deaths have occurred. Discontinue enteric-coated potassium supplements immediately if abdominal pain, distention, nausea, vomiting, or gastrointestinal bleeding occur. Use with caution in pregnant women and nursing mothers since the drug crosses the placental barrier and appears in cord blood and since thiazides appear in breast milk. The drug may result in fetal or neonatal jaundice, thrombocytopenia, and possibly other adverse reactions which have occurred in the adult. When used in women of childbearing age, balance benefits of drug against possible hazards to fetus. *Precautions:* Antihypertensive therapy with this drug should always be initiated cautiously in postsympathectomy patients and in patients receiving ganglionic blocking agents, other potent antihypertensive drugs or curare. Reduce dosage of concomitant antihypertensive agents by at least one-half. Because of the possibility of progression of renal damage, periodic determination of the BUN is indicated. Discontinue if the BUN rises or liver dysfunction is aggravated. Hepatic coma may be precipitated. Electrolyte imbalance, sodium and/or potassium depletion may occur. If potassium depletion should occur during therapy, the drug should be discontinued and potassium supplements given, provided the patient does not have marked oliguria. Take special care in cirrhosis or severe ischemic heart disease and in patients receiving corticosteroids, ACTH, or digitalis. Salt restriction is not recommended. *Adverse Reactions:* Nausea, gastric irritation, vomiting, anorexia, constipation and cramping, dizziness, weakness, restlessness, hyperglycemia, glycosuria, hyperuricemia, headache, muscle cramps, orthostatic hypotension, which may be potentiated when chlorthalidone is combined with barbiturates, narcotics or alcohol, aplastic anemia, leukopenia, thrombocytopenia, agranulocytosis, impotence, dysuria, transient myopia, skin rashes, urticaria, purpura, necrotizing angiitis, acute gout, and pancreatitis when epigastric pain or unexplained G.I. symptoms develop after prolonged administration. Other reactions reported with this class of compounds include: jaundice, xanthopsia, paresthesia, and photosensitization. *Average Dosage:* 50 or 100 mg. with breakfast daily or 100 mg. every other day. *How Supplied:* White, single-scored tablets of 100 mg. and aqua tablets of 50 mg., in bottles of 100 and 1000. (B)46-230-G *For full details, please see the complete prescribing information.*

GEIGY Pharmaceuticals, Division of CIBA-GEIGY Corporation, Ardsley, New York 10502

HY-7764-9

Michigan Medicine

IN THIS ISSUE

SCIENTIFIC ARTICLES

11 The Michigan physician's use and evaluation of his medical journal; John N. Kotre, PhD; Floyd C. Mann, PhD; William C. Morris, PhD; Neal A. Vanselow, MD
17 The prognostic value of Papanicolaou smears; L. W. Beadling, MD; C. Paul Hodgkinson, MD, and A. Alberto Hodari, MD
21 Coccidioidomycosis in Michigan; brief review and case report; Alexander N. Rota, MD; Paul A. Goodman, MD; Harvey Gass, MD
25 What shall we do about drug addiction? Norman Rosenzweig, MD

SPECIAL ARTICLES

39 Important malpractice case decided against doctors; A. Stewart Kerr
58 MD-lawyer principles statement revised
74 SAMA members react to MSMS Annual Session

OTHER FEATURES

3 President's Page
7 MSMS Leadership
8 Your Opinion Please
20 Perinatal Tips
24 Drug Therapy Problems Monthly Surveillance Report
30 Viewpoints
32 Council Minutes
41 About Doctors
44 MSMS News
49 Annual Report
53 New Members
55 Medical Care Programs
60 Michigan Mediscene
79 In Memoriam
80 County Societies
85 Photo Pages
89 Hot News

MICHIGAN MEDICINE is the official organ of the Michigan State Medical Society, published under the direction of the Publication Committee. Published Semi-Monthly, Trimonthly in January and December; 26 issues, by the Michigan State Medical Society as its official journal. Second class postage paid at East Lansing, Mich. and at additional mailing offices. Yearly subscription rate, $9.00; single copies, 80 cents. Additional postage: Canada, $1.00 per year; Pan-American Union, $2.50 per year; Foreign, $2.50 per year. Printed in USA. All communications relative to manuscripts, advertising, news, exchanges, etc., should be addressed to Judith Marr, Michigan State Medical Society, 120 West Saginaw Street, East Lansing, Michigan 48823. Phone Area Code 517, 337-1351. © 1971 Michigan State Medical Society.

INFORMATION FOR CONTRIBUTORS

1. Address scientific manuscripts to the Publication Committee, Michigan State Medical Society, 120 West Saginaw Street, East Lansing, Michigan 48823. Submit original, double-spaced typewritten copy and two carbon copies or photo copies on letter size (8½ x 11 inch) paper. On page one, include title, authors, degrees, academic titles, and any institutional or other credits.

2. Authors are responsible for all statements, methods, and conclusions. These may or may not be in harmony with the views of the Editorial Staff. It is hoped that authors may have as wide a latitude as space available and general policy will permit. The Publication Committee expressly reserves the right to alter or reject any manuscript, or any contribution, whether solicited or not.

3. Illustrations should be submitted in the form of glossy prints or original sketches from which reproductions will be made by Michigan Medicine.

4. Articles should ordinarily be less than four printed pages in length (3000 words).

5. References should conform to *Cumulative Index Medicus,* including, in order: Author, title, journal, volume number, page, and year. Book references should include editors, edition, publisher, and place of publication, as well.

6. The editors welcome, and will consider for publication, letters containing information of interest to Michigan physicians, or presenting constructive comment on current controversial issues. New items and notes are welcome.

7. It is understood that material is submitted for exclusive publication in Michigan Medicine.

SCIENTIFIC EDITOR
John W. Moses, MD

EXECUTIVE EDITOR
Herbert A. Auer

MANAGING EDITOR
Judith Marr

PUBLICATION COMMITTEE
Robert M. Leitch, MD
Union City
Chairman

Donato F. Sarapo, MD
Adrian

Edward J. Tallant, MD
Detroit

A valuable hospital antibiotic —when there is no time

in severe systemic infections—postoperative bacteremia, Gram-negative/staph pneumonias or neonatal sepsis—Kantrex® (kanamycin sulfate) is often indicated before results of customary sensitivity tests can be reported. Clinical response is often seen within 24-48 hours in susceptible infections, with remission soon after.

10 years of experience confirm the continuing effectiveness of Kantrex® against many Gram-negative bacilli (most Pseudomonas are resistant) and staph.

Because of potential ototoxicity, follow dosage instructions carefully as outlined in the official package circular.

Brief Summary of Prescribing Information: (7) 6/19/70. For complete information, consult Official Package Circular

Warning: Irreversible deafness can occur. Tinnitus or vertigo may also occur and indicate vestibular damage and impending deafness. The risk is sharply increased with renal dysfunction. In such cases, decrease size and frequency of doses. Discontinue kanamycin and check hearing if azotemia increases. Watch carefully for ototoxicity in older patients and patients receiving more than 15 Gm. of kanamycin. To avoid neuromuscular paralysis with respiratory depression, postpone intraperitoneal instillation in post-operative patients until recovery from anesthesia and muscle relaxants is complete. Avoid concurrent use of other ototoxic drugs including ethacrynic acid. Safety in pregnancy is not established.

Indications: Serious infections due to susceptible strains of *E. coli*, Proteus sp., *A. aerogenes, K. pneumoniae, Serratia marcescens* and *Mima-Herellea*. Culture and sensitivity studies should be performed.

Contraindications: A history of hypersensitivity to the drug. Prior auditory damage by kanamycin or other agents may be a contraindication if effective alternative therapy is available.

Precautions: Obtain audiograms before and during therapy in patients with renal dysfunction when treatment lasts more than 5 days. Stop Kantrex if tinnitus or hearing loss occurs. Hydrate patients to prevent chemical irritation of the renal tubules. Assess renal function periodically, both before and during therapy. If signs of renal irritation occur (casts, cells, proteinuria) increase hydration and reduce the dosage or the frequency of dosage if necessary—in azotemic patients the frequency (in hours) of doses may be obtained by multiplying the serum creatinine by 9. If azotemia or oliguria occur, discontinue therapy. Mycotic or bacterial superinfection may occur.

Adverse Reactions: Irritation or pain at the injection site, skin rash, drug fever, headache and paresthesias.

Dosage and Administration: The maximum total daily dose should not exceed 1.5 Gm. by all routes of administration. The usual dose is 7.5 mg./Kg./12 hours I.M. The average adult dose is 1 Gm. daily. Uncomplicated infections due to sensitive organisms should respond in 24 to 48 hours. If no response occurs in 3 to 5 days, stop therapy and recheck the bacterial sensitivities. Hydrate patients well to minimize renal irritation. Inject deeply into the upper outer quadrant of the gluteal muscle. Discard partially used vials after 48 hours. The drug should not be physically mixed with other antimicrobials.

Supplied: Rubber capped vials as a ready-to-use sterile aqueous solution in two concentrations: 0.5 Gm. in 2 ml. and 1.0 Gm. in 3 ml. Also available—Pediatric Injection 75 mg. in 2 ml.

A.H.F.S. Category 8:12.28

BRISTOL
BRISTOL LABORATORIES
Division of Bristol-Myers Company, Syracuse, New York 13201

KANTREX® INJECTION (kanamycin sulfate)

MSMS Leadership

PRESIDENT	Harold H. Hiscock, MD	Flint
PRESIDENT-ELECT	Sidney Adler, MD	Detroit
SECRETARY	Kenneth H. Johnson, MD	Lansing
ASST. SECRETARY	Brooker L. Masters, MD	Fremont
TREASURER	John R. Ylvisaker, MD	Pontiac
ASST. TREASURER	C. Allen Payne, MD	Grand Rapids
SPEAKER	Vernon V. Bass, MD	Saginaw
VICE-SPEAKER	James D. Fryfogle, MD	Detroit
PAST PRESIDENT	Robert J. Mason, MD	Birmingham
COUNCIL CHAIRMAN	Ross V. Taylor, MD	Jackson
VICE-CHAIRMAN	Brooker L. Masters, MD	Fremont

DIRECTOR	Warren F. Tryloff	East Lansing
GENERAL COUNSEL	Lester P. Dodd	Detroit
LEGAL COUNSEL	A. Stewart Kerr	Detroit
ECON. CONSULTANT	Clyde T. Hardwick	Houghton
HISTORIAN	Wm. J. Stapleton, Jr., MD	Detroit
ASS'T HISTORIAN	Wm. M. LeFevre, MD	Muskegon
SCIENTIFIC EDITOR	John W. Moses, MD	Detroit

First District Councilors: (Wayne County)
Edward J. Tallant, MD, Detroit
Ralph R. Cooper, MD, Detroit
Frank G. Bicknell, MD, Detroit
Milton R. Weed, MD, Grosse Pointe Park
Brock E. Brush, MD, Detroit

Second District Councilor: Ross V. Taylor, MD, Jackson
Counties: Clinton, Eaton, Hillsdale, Ingham, Jackson

Third District Councilor: Robert M. Leitch, MD, Union City
Counties: Branch, Calhoun, St. Joseph

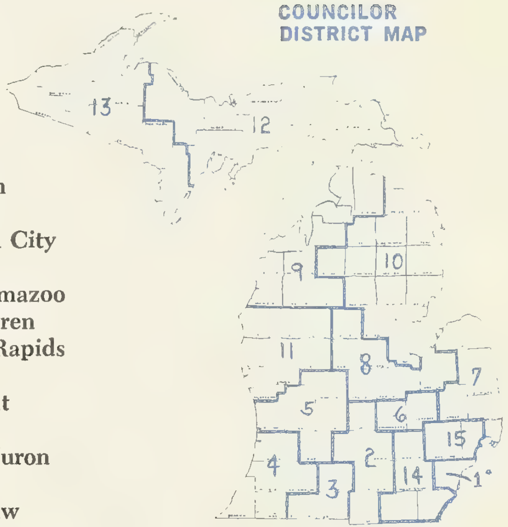
Fourth District Councilor: W. Kaye Locklin, MD, Kalamazoo
Counties: Allegan, Berrien, Cass, Kalamazoo, Van Buren

Fifth District Councilor: Noyes L. Avery, MD, Grand Rapids
Counties: Barry, Ionia-Montcalm, Kent, Ottawa

Sixth District Councilor: Ernest P. Griffin, Jr., MD, Flint
Counties: Genesee, Shiawassee

Seventh District Councilor: John J. Coury, MD, Port Huron
Counties: Huron, Sanilac, Lapeer, St. Clair

Eighth District Councilor: A. Carl Stander, MD, Saginaw
Counties: Gratiot-Isabella-Clare, Midland, Saginaw, Tuscola



Ninth District Councilor: Adam C. McClay, MD, Traverse City
Counties: Grand Traverse-Leelanau-Benzie, Manistee, Northern Michigan (Antrim, Charlevoix, Cheboygan and Emmet combined), Wexford-Missaukee

Tenth District Councilor: Robert C. Prophater, MD, Bay City
Counties: Alpena-Alcona-Presque Isle, Bay-Arenac-Iosco, North Central Counties, (Otsego, Montmorency, Crawford, Oscoda, Roscommon, Ogemaw, Gladwin and Kalkaska, combined)

Eleventh District Councilor: Brooker L. Masters, MD, Fremont
Counties: Mason, Mecosta-Osceola-Lake, Muskegon, Newaygo, Oceana

Twelfth District Councilor: William A. LeMire, Sr., MD, Escanaba
Counties: Chippewa-Mackinac, Delta-Schoolcraft, Luce, Marquette-Alger

Thirteenth District Councilor: Donald T. Anderson, MD, Wakefield
Counties: Dickinson-Iron, Gogebic, Houghton-Baraga-Keweenaw, Menominee, Ontonagon

Fourteenth District Councilor: Donato F. Sarapo, MD, Ann Arbor
Counties: Lenawee, Livingston, Monroe, Washtenaw

Fifteenth District Councilor: Sydney Scher, MD, Mount Clemens
Counties: Macomb, Oakland

Your opinion please

"Do you believe the medical schools should assume the central role not only in the education of physicians but also in determining the nature and quality of health care services provided to the community?"

George D. Stilwill, M.D.
Lansing

In theory, I do not agree with this question. The nature and quality of health care services can best be determined by the practicing physician. However, the inability of independent physicians to act collectively and come up with a positive approach, coupled with the increasing role of the lay person in health care services, makes this impractical.

Therefore, in practice I agree with the question since I would rather see the medical school do it than the lay person and/or the federal government. In the last 30 or 40 years faculty of the medical schools have by and large lost the feeling for, or the concept of, the relationship between the patient seeking medical advice and the physician. In earlier years the faculty of medical schools were more concerned with the rare case and in more recent years they have been more concerned with public health aspects rather than the individual patient. It is my genuine feeling that medical schools have become much too sophisticated (and hence their graduates) for the day-to-day care of the ordinary patient. The faculty simply does not understand the problems of the individual patient seeking help. Currently, they are becoming more aware of the problems of the practitioner.

Other forms of the "healing arts" place their emphasis on the patient seeking help and working with the practitioner. We have seen the effects of this concern for the common man and his medical problems in the recent enactments of the state legislature. Regular medicine has lost out in the last 40 years because of this lack of understanding of the patient seeking medical help.

I think, however, that the medical schools can be of help in determining the nature and quality of health care services provided to the community and can certainly do a better job than the lay person or the government health worker. It is better that the faculty of the medical school fill this void.

I wish that the circumstances were different and that the practicing physicians in the community would determine the nature and quality of health care services (since they are closest to the patient seeking help and understand his problem).

R. W. Phillips, M.D.
Hamburg

With the changing role of our society from agrarianism to industrialization and urbanization, all facets of our lives have been greatly altered.

The medical school and its hospital of a half century ago have persisted with an accretion slower in pace than our technology. For many years in this century the number of our medical schools remained stationary. Research money by private industry and federal funds fostered specialty training to develop the new discoveries of microbiology, pharmacy and engineering. The men who made these discoveries brought medicine to its present high level of achievement.

Today, for cities over 10,000 population, specialists are medically, economically and socially justified. However, the world is composed mainly of small communities held together by vast areas of farm, forest and waste. Both the people in the out-state regions and the inner-city have problems in getting a doctor when ill. Yet ninety percent of our illnesses are easily diagnosed and treated if a doctor is available.

Still, universities largely train for specialty practice and research. In essence they dictate the quality and distribution of health care services (or lack) provided to the community by their negative approach to population mechanics.

It has been only within the past decade that a few universities have been cognizant of the changing structure of our society and developed new programs to bring medicine and doctors to the people. More are needed along with an alteration of the basic structure of the educational philosophy.

In the past in our State of Michigan, the policy has been *status quo* in the training of our physicians. With the rapid growth of the suburb a new type of doctor trained to meet and handle the common ailments of man is required.

It has only been recently with the student movement that the curriculum has undergone major changes. In all of our state medical schools education has finally been removed from a vacuum and is returning the student again to the community.

Fine!

William Haeck, M.D.
Grand Rapids

The question that is posed presupposes Peer Review. This is a very timely topic because as this is written (October), the Senate Finance Committee has just passed a version of the Bennett Amendment. Fortunately for American Medicine, and thanks to the AMA, one's peers for peer review shall apparently be physicians, and not lay people, as could have been possible under the original Bennett Amendment. Who shall do the reviewing is not exactly clear at this time; and what will come out of the Senate, and then the joint House-Senate Conference Committee when the lame duck Congress meets, is anyone's guess. Even if the Professional Standards Review Organizations (PSRO) Amendment is not passed in this session of Congress, it certainly will be passed early in the next session of the Congress.

The AMA stand has been that the "norms" should be guidelines or criteria, developed and created locally, to operate as criteria for local evaluation. The objection to the original PSRO proposal was that it created national norms for care and treatment.

I am strongly in favor of the AMA stand, and therefore am opposed to Peer Review by a medical school. It is true that we expect our medical schools to take the lead in setting standards for proper care and treatment of patients. But American Medicine has always gone along with the idea that acceptable treatment may vary from one locality to another. And I believe this still is true in the field of malpractice. This is not to say that all physicians in all communities should not aim for ideal treatment standards; but I do not believe that all communities are equipped to always attain the ideal standards. We cannot expect the thirty bed hospital to measure up to the four hundred bed hospital in all standards of equipment. Yet who is to say that the patient in the thirty bed hospital is not receiving excellent care? If the medical school becomes the PSRO for the state, they would have to recognize that standards cannot be the same state-wide. The same criticism holds true here that was true for the original Bennett Amendment, where norms were to be set up on a national basis.

I am reminded of the 1966 MSMS convention where after heated debate, a utilization manual, developed by a committee headed by Beverly Payne, M.D., of the University of Michigan, was not adopted by the House of Delegates. I believe its adoption was defeated because among other objections, it was felt that standards varied from community to community. Yet as a general guideline for utilization committees, it was an excellent piece of work. I can see its revival by the House of Delegates if PSRO becomes a reality.

Cecilia Hissong, M.D.
Dearborn

In this day of specialization in all fields of science and learning, I, a family physician, find it increasingly difficult to understand how medical schools can begin to consider themselves qualified to determine the nature and quality of health care services provided to the community.

Medical schools are primarily educators. They should educate students and offer relevant education to physicians in practice.

Physicians belong to the staff of a hospital, but they do not administrate a hospital (unless one is specially trained). They do offer suggestions to the administrator to correct problems which involve patient care, where they have competence. Neither does the administrator tell them how to run their practices—as he is not qualified to do this.

The University can have a very important role in continuing the practicing physician's education and updating knowledge. But, the University does not deliver health care to the Community and cannot be expected to have competence in this area. Surely they can offer valuable ideas on techniques and approach to patients. Only the physician in practice knows how to make these ideas valuable to his (or her) patients.

Those in practice have developed the art and science of delivering health care services to the community. They can, must, and are, sharing these ideas by becoming involved in medical education at all levels. As full time deliverers of health care, they must teach future physicians how to deliver the highest quality of health care to the community. It is obvious, that the practicing physician's "bag" is delivery of health care to the community. He has assumed the central role in determining the nature and quality of provision of health care services. It is natural that he will continue to do this.

Not too little, not too much...
but just right!

"Just right" amounts of Ilosone Liquid 250
can be dispensed easily from the pint bottle in *any* quantity
you specify to meet your patients' precise needs—
without regard to package size.

[illegible]

Ilosone Liquid 250

Erythromycin Estolate

(equivalent to 250 mg. of base per 5-ml. teaspoonful)

Additional information available
to the profession on request.
Eli Lilly and Company
Indianapolis, Indiana 46206

Lilly

100204

The Michigan physician's use and evaluation of his medical journal

By John N. Kotre, PhD
Floyd C. Mann, PhD
William C. Morris, PhD
Neal A. Vanselow, MD
All of Ann Arbor

(Third of a series)

In the first article of this series it was learned that Michigan physicians considered the education available to them in their hospitals in the fair-to-good range and that available in the state at large in the good-to-excellent range.[1]

The second article turned to a discussion of some of the motivational forces affecting physicians, on the assumption that a knowledge of these would aid an understanding of their continuing education activity.[2] It was found that the greatest discrepancy between physicians' work needs and the opportunities available to them had less to do with such things as earning a good salary, having congenial associates, or building one's professional reputation than with the desire to grow and learn new knowledge and skills. The dissatisfaction with opportunities for acquiring new knowledge was characteristic of all four major groups of respondents — the statewide samples of MDs and DOs, the doctors' doctors (doctors to whom others would take their personal medical problems), and the informal/formal consultants (doctors with whom others consult informally and formally).

The present article focuses on physicians' use and evaluation of a principal medium of continuing education, the medical journal. Here, interest is on discovering (1) the extent to which the journal is used, (2) how it is used, and (3) how it is evaluated as a source of education.

Use

Two questions were employed to ascertain the extent to which periodical literature was used by Michigan physicians. One inquired about the number of medical journals to which respondents had paid subscriptions. The other was part of a larger question which asked about physicians' disposition of their time. The latter item asked how many hours per week physicians devoted to reading periodical literature. Results for both these questions are shown in **Table 1.**

Most medical doctors in Michigan (47 percent) had paid subscriptions to three or four medical journals at the time they responded to our questionnaire. Three percent had no subscriptions at all; 20 percent had only one or two; but as many as 29 percent received five or more journals. Osteopaths took significantly fewer medical journals than did medical doctors: nearly nine percent received none at all and 31 percent took only one or two.

The two criterion groups of physicians reported more subscriptions to journals than the general sample of medical doctors, but the difference was significant in the case of the informal/formal consultants only. Thirty-seven percent of this group subscribed to at least five medical journals.

Although the four major groups of respondents differed in the number of paid subscriptions they had to medical journals, they were quite similar in the amount of time they reported devoting to reading journals. About a fifth of each group spent one or fewer hours per week reading periodicals. Slightly more than two-fifths devoted two or three hours a week to reading, and just under two-fifths read four or more hours per week. *For all groups, the average amount of time given each week to reading was close to three hours, or a little over five percent of the typical work week.** This was more time, physicians told us, than they spent on such activities as hospital meetings, giving or obtaining formal consultation, informal discussions with other physicians, or listening to audio tapes.

Among medical doctors, the two background variables which were the most effective discriminants of responses having to do with the medical journal were specialty and age. **Chart 1** depicts significant associations between the specialty of MD respondents and their use of the medical journal.

Chart 1 shows that general practitioners subscribed to fewer journals than others and were among those who spent the least amount of time

Scientific papers

Doctors Kotre, Mann and Morris are with the Center for Research on Utilization of Scientific Knowledge, and Doctor Vanselow is with the Department of Postgraduate Medicine, all at The University of Michigan.

* It was reported in the first article in this series (1) that medical doctors in Michigan said they worked between 51 and 55 hours per week.

TABLE 1

Use of the Medical Journal

	Medical Doctors	Doctors of Osteopathy	Doctors' Doctors	Informal/Formal Consultants
10. To how many medical journals do you have paid subscriptions at the present time?				
PERCENT responding				
(0) 0	3	9	1	0
(1) 1-2	20	31	10	12
(2) 3-4	47	40	60	51
(3) 5 or more	29	19	29	37
No Response	1	1	0	0
	100	100**	100	100**
N =	919	183	96	89
19h. How many hours per week do you devote to reading periodical literature?				
PERCENT responding				
(0) 0	1	1	1	0
(1) 1 or fewer	20	21	20	16
(2) 2-3	39	42	44	43
(3) 4 or more	34	32	33	38
No Response	6	4	2	3
	100	100	100	100
N =	919	183	96	89

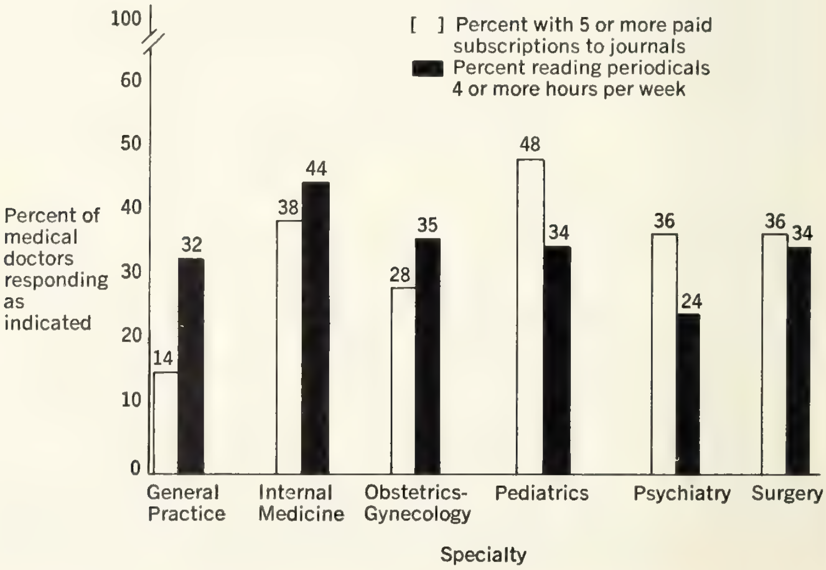
**The mean of this distribution is significantly different from the mean of the medical doctors' distribution at the .01 level (t-test, two-tailed).

reading them. These findings are consistent with data on physicians' work needs: general practitioners were consistently less intense than other groups in their expression of need. The other specialty group showing a relative lack of journal use was psychiatrists, only 24 percent of whom said they devoted at least four hours per week to reading periodical literature.

Internists were the group reporting the greatest amount of time reading periodicals; internists also had more subscriptions than any group except

Chart 1

Use of the Medical Journal by Specialty for Medical Doctors



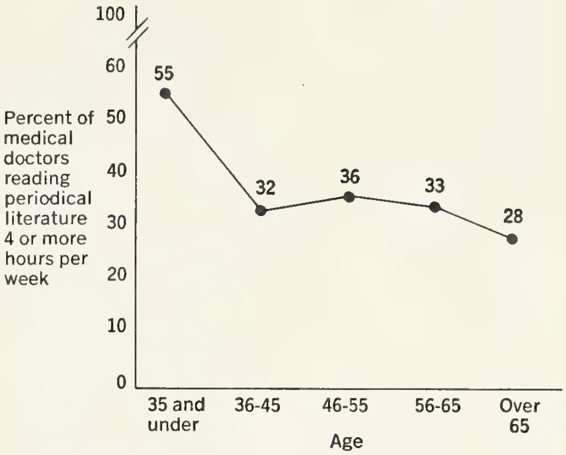
pediatricians. Although nearly half (48 percent) of the pediatricians received at least five journals, they did not devote more time than others to reading them.

Other data (not shown in **Table 1** or **Chart 1**) revealed that doctors in solo practice and doctors affiliated with small hospitals (characteristic practice settings of general practitioners) received fewer journals. These data also indicated that more time was spent on journals by doctors in institutional settings and by doctors affiliated with hospitals of 500 or more beds. Since more internists in Michigan practice in institutional settings and at hospitals of 500-plus beds ("institutions"), these data again confirm our findings regarding specialty.

There was also a significant association in the data between age and the amount of time devoted to periodical literature (**Chart 2**). It was the youngest physicians in our study — those 35 and under — who stood out in the amount of time they gave to periodical reading. Fully 55 percent said they spent at least four hours per week on journals, a percentage far higher than that found in any other age bracket.

Chart 2

Use of the Medical Journal by Age for Medical Doctors



Reading Method

How a physician reads might be as important as how much he reads. Do doctors spend their average of nearly three hours per week skimming and scanning articles, reading only abstracts, or do they read articles, even journals, in their entirety? In particular, do the doctors' doctors and consultants, physicians judged by their peers to be more competent, read in characteristic ways? Data on the reading styles of our respondents are shown in **Table 2**.

Medical doctors and doctors of osteopathy reported reading styles that were quite similar. Slightly more than half of each group (53 and 56 percent) said they read selected articles in their entirety, and about a third (33 and 31 percent) reported that they skimmed, scanned, and read segments of articles. A surprisingly low six percent in each group stated they they looked only at abstracts or summaries of articles. Practically no one (three percent in each case) said they read journals cover to cover.

A significant number of physicians in one of the criterion groups, the doctors' doctors, reported a style of reading different from that of the sample of medical doctors. Almost half (47 percent) said they skimmed or scanned, while only 40 percent stated that they read selected articles in their entirety. The consultants did not differ significantly from the medical doctors in their reading style.

Age was the only background variable that differentiated medical doctors' reported reading styles. As **Chart 3** shows, the greatest age differences

TABLE 2

11. What is your usual method of reading the journals to which you subscribe?

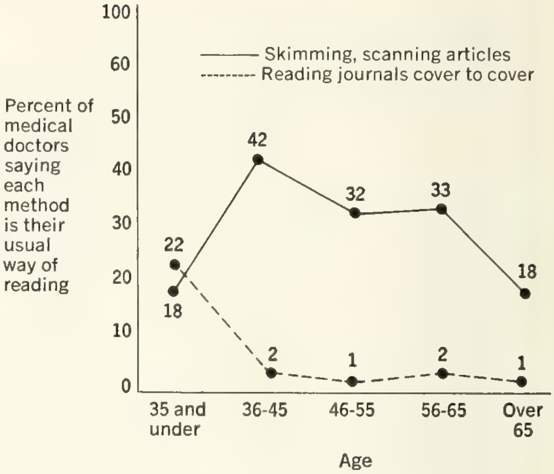
PERCENT responding:	Medical Doctors	Doctors of Osteopathy	Doctors' Doctors	Informal/Formal Consultants
(1) cover to cover	3	3	0	2
(2) not cover to cover but selected articles in their entirety	53	56	40	50
(3) only abstracts and/or summaries of articles	6	6	7	7
(4) not a, b, c, but skimming scanning, reading segments of articles	33	31	47	38
(5) other	2	2	5	3
No Response	3	2	1	0
	100	100	100**	100
N =	919	183	96	89

**This distribution is significantly different from the medical doctors' distribution at the .01 level (chi-square test).

had to do with reading journals cover to cover and skimming and scanning articles. More than one-fifth (22 percent) of the doctors under 36 stated that their principal method of reading journals was cover to cover, and only 18 percent said they skimmed or scanned articles. Doctors 36 and over appeared to have abandoned the intensive reading of the youngest doctors in favor of skimming and scanning. It should be stressed, however, that the predominant reading style of every age group was covering selected articles in their entirety.

Chart 3

Method of Reading Journals by Age for Medical Doctors



Evaluation

It is logical to assume that those groups of physicians who reported greater use of the journal would be the ones who evaluated it more positively. This assumption can be tested by looking at data from two questions that asked for physicians' ratings of the medical journal as a source of education. The first of these questions asked respondents to rate the value of 22 educational activities, one of which was reading periodical literature. The second question appeared much later in the questionnaire and asked simply whether the physician agreed or disagreed with the statement that journals were the best source of medical information. Replies to these two items are shown in **Table 3.**

Approximately half of the medical doctors and the doctors of osteopathy stated that they found educational value to a great or very great extent in reading periodical literature. This is the highest rating which DOs gave to any of the 22 activities whose educational value they were to rate, and it was the second highest rating given by MDs (they rated the value of professional meetings slightly higher). The majority of MDs (57 percent) agreed that journals were the best source of medical information, but the DOs (who had fewer subscriptions) were significantly less positive in their assessment. Only 41 percent of the latter felt that journals were the best source of information.

Doctors' doctors and consultants were consistently more positive about the value of the journals than the general sample of medical doctors. Sixty-one percent of each group said the educational value of periodicals was great or very great (the highest rating given to any of the 22 activities), and 58 and 70 percent respectively said that the journal was their best source of medical information.

Among medical doctors, evaluations of the journal differed by specialty and age, and the differences generally confirmed our expectations from the data on use. General practitioners were the

TABLE 3

Evaluation of the Medical Journal

	Medical Doctors	Doctors of Osteopathy	Doctors' Doctors	Informal/Formal Consultants
16h. To what extent do you find educational value in . . . reading periodical literature?				
PERCENT responding TO A GREAT or VERY GREAT EXTENT	49	50	61**	61**
(No Response/Do Not Use)	(4)	(5)	(1)	(2)
34d. Journals are the best source to which I can go for medical information.				
PERCENT who MILDLY or STRONGLY AGREE	57	41**	58*	70**
(No Response)	(11)	(11)	(10)	(8)
N =	919	183	96	89

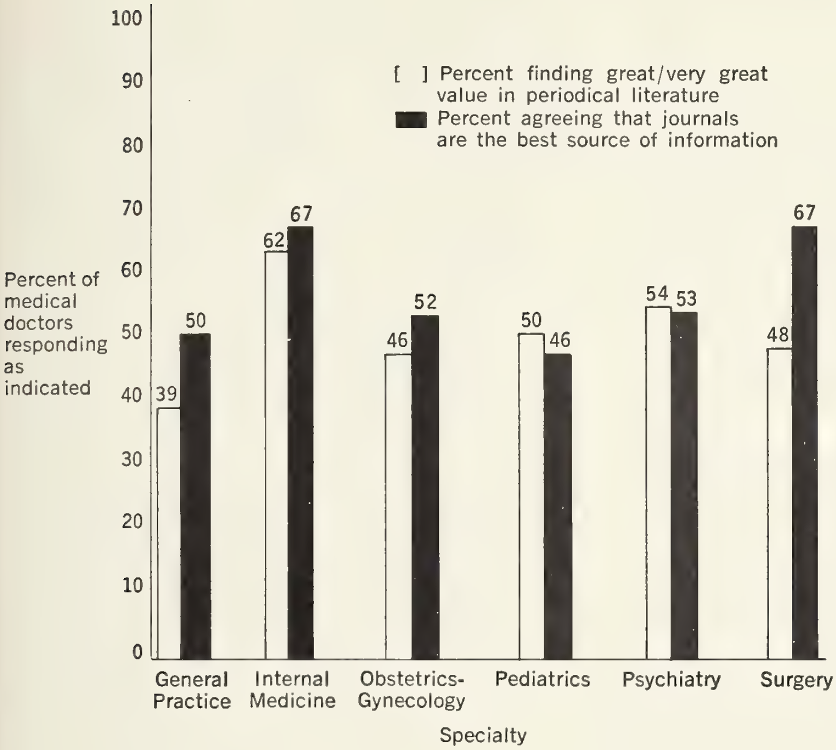
---

*The mean of this distribution is significantly different from the mean of the medical doctors' distribution at the .05 level (t-test, two-tailed). This significant mean difference is not reflected in the figures above, which present only the percentage of respondents in the upper two categories of the distribution.

**The mean is significantly different at the .01 level (t-test, two-tailed).

Chart 4

Evaluation of the Medical Journal by Specialty for Medical Doctors



least satisfied with the journal and internists were the most satisfied (Chart 4). For example, only 39 percent of the GPs, compared with 62 percent of the internists, found great or very great value in periodical literature, and only 50 percent of the GPs, compared with 67 percent of the internists, agreed that the journals were the best source of information. We might recall that general practitioners were the specialty group which expressed the least intense work needs and which reported the least amount of journal use, while internists were the ones reporting the greatest amount of journal use. Data on type of practice revealed that doctors in solo practice (who are disproportionately GPs) rated the educational value of periodicals less highly than those in other practice settings.

Other groups showing distinctive response patterns were pediatricians, who did not feel that journals were the best source of medical information (despite the fact that they subscribed to more of them than anyone else), and surgeons, who were as emphatic as internists in their regard for journals as sources of information. Doctors in southeast Michigan (where there are more internists and surgeons) were more enthusiastic than doctors in other areas of the state about the journal as a source of information.

The data on evaluations by age are also consistent with the data on use (**Chart 5**). **It was the** physicians under the age of 36 who saw the greatest value in periodical reading — the same age group which exhibited the strongest work needs, said it spent more time reading, and read in greater depth. Doctors in institutional practice also stated that they found more educational value in journals than doctors in other practice situations.

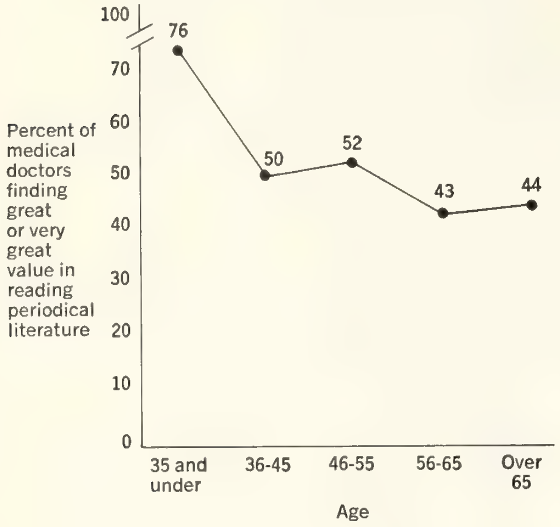
There was clear evidence in our data that the medical journal was used less by general practitioners and valued less highly by them. Other characteristics associated with low use and/or evaluation are solo practice, affiliation with a small hospital, and increasing age. All of these characteristics were found to be interrelated and descriptive of general practitioners. Osteopathic physicians also rated low on several measures in their use and evaluation of the journal. This is not surprising, since they are mainly general practitioners affiliated with small hospitals. The journal received its greatest use and/or most positive evaluation from MDs who were internists, in institutional practice, at large hopitals, under the age of 36, and located in southeast Michigan.

Summary and Implications

The typical Michigan physician reported that he subscribed to three or four medical journals and spent approximately three hours per week

Chart 5

Evaluation of the Medical Journal by Age for Medical Doctors



reading them (five percent of his total work week). Most physicians reported that they either read selected journal articles in their entirety or skimmed, scanned, and read segments of articles. In general, journal articles were felt to be important sources of medical information. Specialists and younger physicians tended both to value and to use medical journals more than others; general practitioners, osteopaths, and older physicians placed less value on journals and tended to make less use of them.

The increased amount of time devoted to journal reading by younger physicians merits some comment. Although it is tempting to attribute this to greater intellectual motivation among recently graduated physicians, the observation may merely reflect a greater amount of time available for reading. Since they have just entered practice, physicians under 35 in many cases carry a smaller patient load than older doctors and as a result may have considerably more time to devote to reading. In this regard it is interesting to note that younger physicians tend to read journals cover to cover — a less discriminating approach than that used by older physicians who presumably must guard the use of their time more carefully,

It seems obvious that the typical medical journal has less appeal to the general practitioner than to the specialist. This may be a result of the fact that most medical journals are published by specialty societies and are aimed directly at the specialist; relatively few journals tend to publish the broad spectrum of articles which might appeal to the generalist. In view of the recent emphasis on family practice and comprehensive medical care, it seems essential that a concerted effort be made to study the journal needs of the family physician and improve the number and quality of offerings available to him.

The finding that most physicians devote only three hours per week to reading medical literature raises a question regarding the present format of most journals. Physicians value the medical journal as an important potential source of information and yet are able to devote only five percent of their work week to reading. One might debate whether the traditional method of presenting scientific articles (introduction; materials and methods; results; discussion; summary) is the most efficient way of transmitting important information succinctly. The present study suggests the need for more journals which attempt to summarize important advances in a concise and less traditional manner, so that the few hours available to the physician for reading can be utilized more effectively.

References

1. Mann, F., Kotre, J., Reilly, A., and Vanselow, N. The Michigan Physician and His Continuing Education. *Michigan Medicine,* 69: 981, 1970.
2. Mann, F., Kotre, J., Reilly, A., and Vanselow, N. The Michigan Physician: His Work Needs and Opportunities. *Michigan Medicine,* 69: 1063, 1970.

This research was supported by the Michigan Association for Regional Medical Programs, Contract Number 69-5-23.

Michigan Authors

William D. Robinson, M.D., Ann Arbor, "Neuropathic Arthritis—Not Due to Malathion Exposure," page 920, *Journal of the American Medical Association,* Nov. 2, 1970.

Hilliard Jason, M.D., Ed.D., East Lansing, "Some High Priority Needs in Medical Education," page 106, *World Medical Journal,* September-October, 1970.

Andrew D. Hunt, Jr., M.D., East Lansing, "The Health Crisis: A Challenge to Health Professions Schools and their Graduates," page 6, *Michigan Pharmacist,* November, 1970.

W. H. Beierwaltes, M.D., Ann Arbor, and others, "Treatment of Thyroid Cancer," page 1437, *Journal of the American Medical Association,* Nov. 23, 1970.

Kenneth B. Herrington, M.D., Bad Axe, "A Rational Approach to Drug Therapy," a panel presentation, *Patient Care,* Oct. 31, 1970.

The prognostic value of Papanicolaou smears

By L. W. Beadling, MD
A. Alberto Hodari, MD
C. Paul Hodgkinson, MD
All of Detroit

The large, heterogeneous patient population, the extensive use of the Papanicolaou smear and the high medical follow-up rate of patients treated in the Gynecology and Obstetrics Clinic of the Henry Ford Hospital have afforded an unparalleled opportunity to assess the clinical value of the cytologic smear.

"Pap smears" are included routinely in the physical examinations of 95% of the women seen in the hospital's Out Patient Department who have reached 18 years of age, or who are sexually active irrespective of age. Cervicitis, vaginitis, excessive vaginal discharge or previous hysterectomy are considered invalid reasons for failure to obtain a Papanicolaou smear. Thus, the hospital's cytology laboratory annually screens more than 23,000 smears.

In recent years, the cytologic smear has been utilized as a screening technique rather than a definitive diagnostic procedure[2]. However, the Department of Gynecology and Obstetrics at the Henry Ford Hospital has taken the position that pelvic malignancy may neither be excluded solely on the basis of a negative smear nor confirmed by abnormal cytologic findings. This study was undertaken to determine the prognostic value of abnormal cervico-vaginal cytology, and the implication of this diagnosis in formulating the patient's subsequent clinical management.

Methods

During the six-year period from January, 1960, to December, 1965, more than 120,000 cervico-vaginal smears were screened at Henry Ford Hospital. Results were reported in three categories: negative (Papanicolaou I and II), suspicious (Papanicolaou III), and positive (Papanicolaou IV and V). Examination of the Hospital Cytology Registry for these six years disclosed that 929 women had suspicious or positive cytology reports. The charts of these patients were selected for thorough review. All vaginal and cervical smears were taken by a physician using the Ayre wooden spatula. Two smears were obtained from each patient — first, of the vaginal pool, then of the cervix using the cervical scrape technique. Both slides were immediately placed in 95% alcohol. The slides were processed by the Papanicolaou technique[4] and screened by a registered cytology technician. All suspicious and positive smears were re-examined by a pathologist before the final report was recorded.

Table I

Age Distribution of Abnormal Smears

Age	Suspicious	Positive
Under 20	8	2
21 - 25	26	17
26 - 30	49	28
31 - 35	56	44
36 - 40	42	61
41 - 45	56	62
46 - 50	44	38
51 - 55	51	46
56 - 60	47	46
61 - 65	49	42
66 - 70	37	24
71 - 75	26	9
76 - 80	6	9
81 - 85	1	2
86 - 90	0	1

Results

A. Age Distribution of Abnormal Smears

Of the 929 abnormal cervico-vaginal smears examined in the six-year period, 498 (54%) were classified as suspicious and 431 (46%) were positive. As seen in **Table I**, the majority of suspicious and positive smears were obtained from women between the ages of 30 and 60. The youngest patient having an abnormal smear was 18 years of age and the oldest 87 years of age. The frequency of abnormal smears rose abruptly in the third decade, remained stable until age 60, then declined slowly over the next 20 years. The ratio of 54% suspicious to 46% positive smears coincided in all age groups except in the group younger than 30 years, in which 64% of the abnormal smears were suspicious, and in the group over age 75, in which positive smears constituted 64% of the total. Suspicious smears were encountered in eight women under 20 years of age. Two patients in this group had positive smears. Of these 10 patients, six were subjected to cone cervical biopsy, three were lost to follow-up and one underwent serial Papanicolaou smears that were found to be negative. Four of the six patients biopsied were found to have cervical carcinoma in situ, one had squamous meta-

---

Doctor Beadling and Doctor Hodgkinson are in the Department of Gynecology and Obstetrics at Henry Ford Hospital and Doctor Hodari is with the Crittenton Hospitals of Detroit and Rochester.

Table II

Carcinoma of the Cervix

	Number of Smears	No Malignancy	Ca. In Situ	Ca. Invasive	Other
Suspicious Pap. Smear	270	137 (51%)	95 (35%)	18 (7%)	20 (7%)
Positive Pap. Smear	366	74 (20%)	186 (51%)	79 (21%)	27 (8%)
Total	636				

Table III

Extracervical Carcinoma

	No.	No Malignancy	Vulva	Vagina	Endo	Ovarian	Cervix	Other*
Suspicious	270	137	2	5	8	1	114	3
Positive	336	74	2	3	16	3	276	2

---

*This includes carcinoma of the bladder, Skene's gland, rectum and breast with metastases.

plasia and 1 cervical dysplasia. Both patients with positive smears were proven to have carcinoma in situ.

B. Incidence of Malignancy

The incidence of malignant disease was 27% in patients with suspicious smears and 68% in patients with positive smears, giving an overall incidence of 49%. **Table II** indicates the disparity between the total number of abnormal smears in the six year period studied and the number of smears followed by definitive tissue diagnosis. Of the 929 patients with initially suspicious or positive cytology, 636 underwent further diagnostic examination at Henry Ford Hospital. Of the remaining 293 patients, a few were lost to follow-up despite repeated attempts to contact them; others were followed by their referring physicians.

The remainder, and by far the majority of the 293 patients in question, subsequently had negative cytologic findings. These patients were followed at six month intervals by pelvic examinations and serial Papanicolaou smears, and as long as the repeat smears remained negative, biopsy was withheld. Patients having positive smear reports on re-examination were subjected to dilatation and curettage of the uterus and appropriate biopsy of the cervix. Extracervical carcinoma was discovered in 5% of the patients with abnormal cytology; extrauterine carcinoma was proven in 2.3%. The most common extracervical malignancy was endometrial, followed by vaginal, vulvar and ovarian **(Table III)**. Twenty patients were suspected of having endometrial carcinoma through cytologic screening. In 13 patients, smears suspicious for endometrial malignancy were reported and in 7, smears were reported to be positive. Curiously, of the 13 patients with suspicious reports, only one had endometrial carcinoma. However, every patient whose smear was positive for endometrial malignancy was confirmed to have endometrial carcinoma by cervical biopsy and uterine curettage.

C. Correlation of Symptoms with Abnormal Smears

In patients who denied having gynecological symptoms suggesting malignancy, detection by smears alone accounted for 192 cases of in situ cervical cancer and 51 cases of invasive cervical malignancy. Less than a third of the patients with abnormal smears had symptoms indicating any type of gynecological disorder **(Table IV)**. On the other hand, a history of traumatic vaginal bleeding was 5 times more frequent in patients with posi-
was five times more frequent in patients with positive cytology. In this group, invasive cervical malignancy was diagnosed in 64% of the patients with this symptom.

D. Occurrence of Malignancy Following Cytologic Re-Examination

One hundred ninety-one patients with suspicious Papanicolaou smears and 196 patients with positive smears had repeat cytology prior to biopsy **(Table V)**. Malignancy was demonstrated by cervical biopsy in 16% of the patients whose initial smears were suspicious but whose repeat smears were negative, whereas a 54% incidence of malignant disease was found when the initial smear was positive and the repeat smear negative. Fifty-five percent of the patients with suspicious cytology in both initial and repeat examinations, and 81% of those whose initial and repeat smears were positive were subsequently proven to have malignant disease. Malignant pathology was found in 77% of those whose initial smears were positive and repeat smears suspicious, while a malignant diagnosis was confirmed in 86% of the patients whose cytology was positive initially but was classified suspicious upon re-examination.

Comment

The importance of routine smears in the long-term prognosis is evident from this study. None of the patients with abnormal findings, whose smears had been negative within the previous one-year period, were found to have incurable cervical cancer. Except for one, all of the patients subsequently found to have malignant disease in this group were considered cured after a minimum of three years' follow-up. The patient who was the exception developed a severely hyperplastic adenocarcinoma of the periurethral glands and expired after two years. Among the malignancies identified in those patients later reported to be cured were 26 cases of cervical carcinoma in situ, two cases of invasive cervical carcinoma Stage I, one case of invasive cervical carcinoma Stage II, one case of in situ carcinoma of the vagina, and 11 cases of endometrial cancer.

Our survey indicates that uterine curettage and cold cone biopsy of the cervix are appropriate in cases of suspicious cytology upon initial and repeat examinations. It is also apparent that biopsy may safely be withheld in patients with one suspicious Papanicolaou smear, along as subsequent smears remain negative. It is recommended, however, that such cases be followed by pelvic examinations at six month intervals.

The results of this study do not support the use of cervico-vaginal cytology as a reliable means of ruling out extracervical forms of genital carcinoma. In all patients proven to have endometrial carcinoma, clinical symptoms were present to warrant performing a diagnostic curettage regardless of the smear report. Koss and Durfee have established that, at best, only 60% of endometrial carcinoma can be screened by cytologic techniques[3]. However, a positive vaginal smear was the only factor responsible for the suspicion of malignancy in six patients with vaginal carcinoma, one with ovarian cancer, and two with vulvar carcinoma. This experience indicates that in patients with positive Papanicolaou smears in whom no cervical or endometrial malignancy is identified, further search should be made for extrauterine sites of malignancy. All of the patients with abnormal cytology in the under-20 age group had histories suggesting an early and active sexual life. This finding corresponds with other reports[1] concerning the positive relationship of cervical cancer to early intercourse and sexual promiscuity, and further supports the clinical value of cervico-vaginal cytology in all sexually active women irrespective of age.

Table IV

Symptoms

	Suspicious	Positive
Total Number	498	431
No Symptoms	364 (73%)	289 (67%)
Excessive Vaginal Discharge	40 (9%)	29 (7%)
Abnormal Menstrual Bleeding	46 (9%)	44 (10%)
Traumatic Bleeding	6 (1%)	18 (5%)
Postmenopausal Bleeding	17 (3%)	29 (7%)
Pain	14 (3%)	11 (2%)
Other	11 (2%)	11 (2%)

Table V

Malignancy Rate in Repeat Smears

Initial	Repeat		Number of Malignancies	
Suspicious	— Negative	73	12	16%
Suspicious	— Suspicious	60	33	55%
Suspicious	— Positive	58	50	86%
	Total	191		
Positive	— Negative	28	15	54%
Positive	— Suspicious	22	17	77%
Positive	— Positive	146	118	81%
	Total	196		

The results of this investigation most emphatically suggests that invasive carcinoma of the cervix might largely be eliminated by a conscientious program of annual pelvic examinations supplemented by cervico-vaginal cytology. Moreover, strict adherence to this regime might also reduce substantially the mortality rate attributed to other forms of gynecologic malignancy.

Bibliography

1. Anderson, W. A. D. and Gunn, S. A.: Cancer of the cervix (time interval in repeating a cytology smear). CA-A Cancer Journal for Clinicians 17: 150, 1967.

2. Faulconer, R. J.: The value and pitfalls of vaginal and cervical smears in the detection of endometrial and extra-uterine cancer: a reminder. CA-A Cancer Journal for Clinicians 18:96, 1968.

3. Koss, L. G. and Durfee, G. R.: Cytologic diagnosis of endometrial carcinoma: result of ten years experience. Acta. Cytol. 6:519, 1962.

4. Papanicolaou, G. H. and Traut, H. F.: Diagnosis of uterine cancer by the vaginal smear. The Commonwealth Fund, New York, Chapter 1, pg. 3, 1943.

Perinatal Tips

By Paul M. Zavell, MD
Detroit

The following case from the files of the Wayne County Medical Society Perinatal Mortality Committee is presented as an aid in continuing education.

Maternal

This was the second pregnancy of a 26 yr old O+ black mother. Her first pregnancy was uneventful with a normal living child at home. Her present pregnancy was uneventful until she developed premature rupture of the membranes at 36 wks. She was admitted to the hospital 13 hrs later. She had six uneventful prenatal visits. Her serology for syphilis was negative. At the time of admission she had a foul vaginal discharge and a lowgrade (99-100) temp. 34½ hrs after rupture of her membranes and following induction with pitocin she delivered a female infant.

Fetal

The five-pound, five-and-a-half ounce black female infant was admitted to the suspect nursery after routine treatment in the delivery room included Crede treatment of the eyes. Cultures from the cord, blood, axilla and throat were negative. The cord blood was O with negative Coombs. IgM was a trace, IgG was 770 mgm % and IgA was a trace. There were no problems until the fourth day when her left eye became swollen and a purulent discharge was noted. The right eye and physical exam were normal. A gram stain showed negative intra- and extracellular diplococci. A culture of the purulent eye discharge (as well as the mother's vaginal discharge) proved to be N. gonorrhea. The infant was treated with isoptocetamide eye drop, erythromycin eye ointment and I.M. Penicillin 100,000 U q 8 hr. After 24 hrs there was marked improvement and by 72 hrs the eye appeared normal. Subsequent culture of eye (and mother's vagina) were negative. The infant was treated for eight days. At six months of age her eye appears to be normal grossly and by ophthalmologic exam.

Perinatal Committee Comments

1. With premature rupture of membranes and a foul vaginal discharge induction of labor at an earlier time could have been considered.

2. The infant's eyes may not have been treated correctly after birth as far as technique is concerned. The Crede method is not 100% and if carried out properly it is a *two* person job (one holding eye open and other depositing the silver nitrate in the proper area). This should be done in the delivery room or within the first hour or two of birth.

3. It is suggested that all OB patients should have vaginal smears (and cultures if necessary) when first seen and again at eight to nine months of pregnancy to try to rule out G.C. and other infections.

Doctor Zavell is chairman, Neo-Natal and Hospital Care Committee, Michigan Chapter, A.A.P., and chairman, Perinatal Mortality Study Committee, Wayne County Medical Society.

Coccidioidomycosis
in Michigan: brief review and case report

By Alexander N. Rota,
MD, MSc, (Path.)
Paul A. Goodman, MD
Harvey Gass, MD
Detroit

Coccidioidomycosis, a protean fungal disease caused by Coccidioides immitis, is endemic in the Southwestern United States, Northern Mexico, and parts of Central and South America especially Argentina.[1] The organism is extremely infectious affecting up to 90% of the resident population in endemic areas. The infection is most often asymptomatic, and is detected only by the development of a positive delayed reaction to intradermal injection of the polysaccharide antigen (Coccidioidin) obtained from the organism. However, in less than 10% of those infected, an acute respiratory disease develops which is usually self limited, but which may develop into a chronic granulomatous lesion resembling tuberculosis. In less than 1% of those infected, the disease is chronic and disseminated involving any organ, especially the bones, skin, or central nervous system. In general, the chronic disseminated disease occurs as a secondary infection carried by the blood stream to distal sites from the primary focus in the lungs. On rare occasions, the primary form of the disease may begin as a chronic skin granuloma following direct inoculation of organisms.

The chronic form of the disease, whether pulmonary, cutaneous, or disseminated often has a progressive course ranging from months to years. In this chronic form, the disease may occur in areas far distant from endemic zones and relatively remote in time from the patient's latest travel from endemic zones where the infection was initially acquired. Also, since the organism is quite hardy, on rare occasions, the infection may be acquired in geographic areas distant from endemic zones by contact with contaminated products shipped from these areas.[2] Under these circumstances, physicians practicing in areas geographically remote from endemic zones, may at any time be called upon to diagnose and treat coccidioidomycosis. The physician in non-endemic areas who encounters coccidioidomycosis is most likely to see one of its chronic forms in which the diagnosis is most difficult because the clinical picture may mimic many neoplastic or other infectious conditions.

The following report describes a patient with chronic coccidioidomycosis acquired in the Southwestern United States who died in Michigan. The disease was not suspected clinically and was diagnosed only at autopsy. Brief reference is made to 12 other cases of coccidioidomycosis reported in Michigan.

Report of the Case

Shortly before admission to hospital in December 1966, the patient, a 70 year old Negro woman, who was unable to give a reliable history, was moved to Detroit from her home in Nevada because she could no longer care for herself. Her disease presented with weakness, anorexia, a 30 pound weight loss over the preceding 6 months, vertigo and personality changes. The patient appeared cachectic, with a blood pressure of 200/100, pulse 110/minute, respirations 20/minute and temperature 99.4°F. There was generalized weakness, an equivocal left Babinski sign and decrease in the left carotid pulse. A diagnosis of probable malignancy was made. Radiologic examination of the chest, gastrointestinal tract and urinary tract disclosed no abnormalities. A mild hypochronic normocytic anemia and a low serum sodium of 124 MeE/liter were noted. Serologic tests for syphilis were negative.

Two weeks after admission, the patient rapidly became semicomatose over a 24 hr. period. When speech could be elicited, it was described as "bulbar." There was rigidity of the neck and left facial weakness. The fundi could not be visualized because of cataracts. Clear spinal fluid was noted on lumbar puncture with an opening pressure of 280 cm. of water. There were 50 RBC and 100 WBC per mm^3 with a differential of 76% lymphocytes and 24% polymorphonuclear leukocytes. The spinal fluid protein was 165 mgm% and the Pandy test was 4+. Microscopic examination of the direct smear showed no organisms. Cultures of spinal fluid grew no bacteria. Enough spinal fluid was not available for determination of glucose and chloride levels, and for serologic tests for syphilis.

Roentgenograms of the skull disclosed generalized osteoporosis with erosion about the dorsum sellae suggesting chronic intracranial hypertension. Brain scan showed a normal uptake. An electroencephalogram was unremarkable. A pneumonoencephalogram revealed some air in the subarachnoid space, but no filling of the ventricular system. A basal cisternogram suggested the possibility of a cerebello-pontine angle mass on the left side.

Four weeks after admission, an exploratory craniotomy on the left posterior fossa was done be-

---

The authors are with the Departments of Pathology and Neurosurgery of Sinai Hospital of Detroit and Wayne State University School of Medicine.

cause of her neurologic status, the elevated cerebral spinal fluid protein, neck rigidity, bulbar speech and suspected cerebello-pointine angle mass. No tumor was found at operation. However, adhesions between the cerebellar tonsils at the outlet of the 4th ventricle were found. The adhesions were lysed and a Torkildsen tube drainage was performed between the left lateral ventricle and cisterna magna. A post operative diagnosis of arachnoiditis with adhesions at the foramen of Magendie and between the cerebellar tonsils with obstruction at the outlet of the 4th ventricle was made. No surgical specimen was obtained for histologic or bacteriologic examination. There was no improvement in the patient's condition. She died seven and one half weeks after admission; and 25 days post operatively.

Autopsy Findings

Significant autopsy findings were confined to the right lung and the central nervous system. The right lung weighed 340 grams. In the base, there was a 1 cm. nodule with a central mass of amorphous necrotic debris, and a peripheral fibrotic layer. Microscopically, the nodule was a granuloma with central necrosis, surrounded by epithelioid cells, and clusters of Langhan's giant cells. No micro-organisms were found. The brain weighed 1050 grams. There was slight clouding and thickening of the meninges at the base. The ventricular system was slightly dilated throughout. Microscopically, the meninges in all areas of the basilar portions of the brain and the spinal cord were infiltrated by lymphocytes. In many areas about the base of the brain, brainstem and cerebellum, there were frequent giant cells **(Fig. 1)**. Within many of the giant cells were oval and round bodies from 20-40 microns in diameter with highly refractile walls filled with endospores. These were considered to be typical endosporulating spherules of Coccidioides immitis **(Fig. 2)**, even though bacteriological examinations were not carried out as further proof. Death was ascribed to hydrocephalus following obstruction of the ventricle by adhesions produced by chronic coccidioidomycosis of the leptomeninges.

Discussion

Harrell and Honeycutt[3] reported 12 cases of chronic coccidioidomycosis acquired in the Southwestern United States diagnosed and treated in Michigan. In none of their cases was the diagnosis suspected clinically prior to finding of the organism on culture or in biopsy material. Our case is similar in that the diagnosis was not suspected during the patient's life, but differed in that the disease presented primarily as a neurologic disorder. Without cultural and serologic confirmation, the diagnosis of coccidioidal meningitis in our case rests solely on the presence of characteristic organisms in the giant cells of the granulomatous inflammation of the meninges. The granuloma of the right lung, even though the causative organisms could not be demonstrated, was considered likely to be due to coccidioidal infection and the probable primary site of the disease.

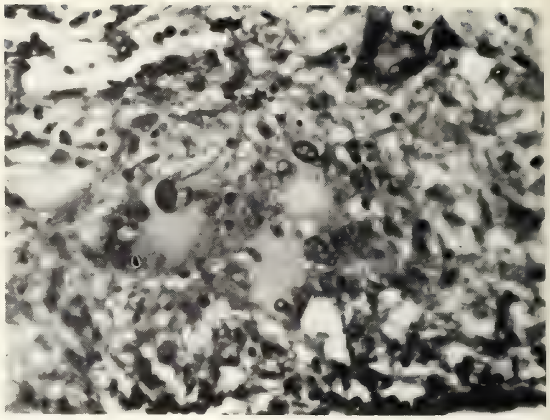


Figure 1

Granulomatous inflammation of the leptomeninges showing multinucleated giant cells containing characteristic coccidioidomycosis spherules. Hemalum, Phloxine, Saffron X400

The diagnosis of coccidioidomycosis is not difficult if the possibility is suspected. The organism easily cultured from most sources except the spinal fluid, assumes a characteristic shape and size in smears of sputum and exudates and in histologic sections. The serologic criteria for diagnosis are well established and reliable.

The fungus occurs in nature in the mycelial stage. The aerial mycelia develop into infectious arthrospores, which are disseminated in windblown dust. After inhalation or inoculation, the arthrospores develop in tissue into spherules containing endospores. When the disease becomes established in the host, a granulomatous reaction occurs. Spherules, shed into the environment in sputum or in pus, are not infectious under ordinary circumstances. Endospores from spherules, when placed on the proper culture medium, rapidly develop into mycelia. Confirmation of cultural appearance of the colony is made by microscopic examination of mycelia with arthrospores and conversion of these into endospore containing spherules following animal inoculation. Diagnosis is therefore established by finding the characteristic spherule in sputum, exudates, or tissues of the patient or of the inoculated animal. Laboratory identification of the organism is desirable but not without considerable hazard to laboratory personnel since arthrospore-containing cultures are highly infectious. Many instances of laboratory acquired coccidioidomycosis have been documented.[4] Suspected cultures of Coccidioides immitis should be handled with extreme care.

Serologic studies are valuable in this disease from both a diagnostic and a prognostic viewpoint.[5] The well known intradermal skin reaction to Coccidioidin is, however, of little value in the diag

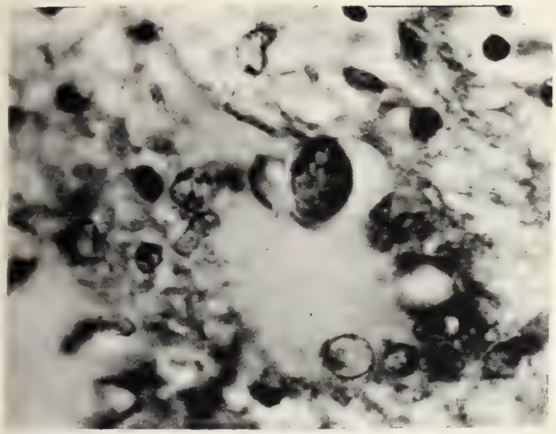


Figure 2

Detail from figure 1 showing a large typical spherule of Coccidioides immites with a refractile wall containing endospores. Hematoxylin, Phloxine, Saffron X1000

nosis of chronic disseminated coccidioidomycosis since it is often negative in the more severe forms of the disease. Furthermore, cross reactions of Coccidioidin with histoplasmin are common complicating the interpretation of these skin tests in patients in Southern Michigan, an area highly endemic for histoplasmosis. Because precipitins rapidly disappear from the serum after the acute stage of the disease has passed and because the precipitin reaction is positive only in the acute stage, this test has no place in the diagnosis of chronic coccidioidomycosis. The serologic test of greatest value is the complement fixation reaction which usually becomes positive in the disseminated disease and is quite specific. A positive complement fixation reaction, even in low titer, is highly suggestive of disseminated coccidioidomycosis and when obtained from the spinal fluid is diagnostic. A high or rising complement fixation titer is indicative of a poor prognosis. The complement fixation reaction for coccidioidomycosis can be obtained through the Laboratories of the Department of Health of the State of Michigan. One additional prognostic point is that the disease is much more likely to disseminate and end fatally in the dark skinned races than in the white.[5]

Effective treatment is available today. Localized persistent pulmonary lesions may be removed by segmental pulmonary resection. Arrest of the disease and possible cure of the disseminated forms may be achieved in some cases with intensive use of Amphotericin B.[6] In neurological cases with persistent hydrocephalus, shunting procedures may be indicated.[7]

Our experience allows us to reemphasize the need of obtaining a careful travel history in a patient with any obscure illness and the need to perform relevant diagnostic tests in the identification of further instances of coccidioidomycosis.

Summary

A fatal case of coccidioidomycosis occurring in Michigan is reported and the pertinent literature reviewed. Emphasis is placed on the need to suspect this disease in geographic areas remote from endemic zones, especially in patients who develop obscure clinical signs and symptoms following travel from endemic areas.

References

1. Conant, N. F., Smith, D. T., Baker, R. D., Calloway, J. L., and Martin, D. S.: Manual of Clinical Mycology, Second Edition, W. B. Saunders Co., Phil., 1954, Chapter 5.
2. Louria, D. B.: Deep seated mycotic infections, Allergy to fungi and mycotoxins. New Eng. J. Med. 277: 1965, 1967.
3. Harrell, E. R., and Honeycutt, W. M.: Coccidioidomycosis: A traveling fungus disease. Arch. Dermat. 87: 188, 1963.
4. Johnson, J. E., Perry, J. E., Fekety, F. R., Kadull, P. J., and Cluff, L. E.: Laboratory-acquired coccidioidomycosis, A report of 210 cases. Ann. Int. Med. 60: 941, 1964.
5. O'Leary, D. J. and Curry, F. J.: Coccidiodomycosis: A review and presentation of 100 consecutively hospitalized patients. Am. Rev. Tuber. 73: 501, 1956.
6. Jackson, F. E., Kent, D., and Clare, F.: Quadriplegia caused by involvement of cervical spine with Coccidioides immitis: Symptomatic cure after operation and amphotericin-B treatment. J. Neurosurg. 21: 512, 1964.
7. Ramseyer, J. C., Baker, R. N., and Tomiyasu, U.: Ventriculovenous shunt in treatment of obstructive hydrocephalus due to coccidioidomycotic meningitis. Neurol. 16: 701, 1966.

DRUG THERAPY PROBLEMS

By Robert E. Pearson, MS
Persis Mehta, PhD
Ann Arbor

Q. Is cholera vaccine (Asian strain) also effective against cholera caused by African strains of the virus? (G. C., Ypsilanti)

A. *Yes.*

Q. What are the comparable doses of methadone and meperidine? (H. V., Ann Arbor)

A. *Methadone is about ten times more effective than meperidine weight for weight, hence the dosage of methadone should be about one-tenth that of meperidine to elicit the same response.*

Q. Is it advisable to administer gamma globulin against infectious hepatitis to subjects previously immunized by influenza vaccine? (D. H., Battle Creek)

A. *Antibodies to influenza antigen are usually formed in the body within a very short time after vaccination, hence there would be little danger of gamma globulin neutralizing the effects of the vaccine. In any event, it would be in the best interest of the patient to give first consideration to the prevention of hepatitis, since hepatitis is a more serious infection than is influenza.*

Q. Is an oral preparation of folinic acid available? (R. L., Ann Arbor)

A. *Calcium leucovorin (the calcium salt of folinic acid) is marketed in the form of a sterile aqueous preparation. Although the solution is usually administered intramuscularly, it may also be given orally to combat the toxic effects of pyrimethamine. The drug is, however, less active by this route.*

Q. Has clomiphene citrate (Clomid®) been used to treat infertility in males? (J. F., Ann Arbor)

A. *There have been a few reports of clinical investigations of the drug in males. The effect of clomiphene on the pituitary gland (*J. Clin, Endocr. 27 *[11], 1967), on germinal cells* (ibid. 30 *[2], 1970), and on hypogonadotrophism* (Ann. Intern. Med. 71 *[6], 1969) in men was studied.*

Mr. Pearson is project coordinator and Doctor Mehta is associate project coordinator or the Michigan Regional Drug Information Center, University Hospital, Ann Arbor.

MICHIGAN
DEPARTMENT
OF PUBLIC
HEALTH

Monthly Surveillance Report

Cases of Certain Diseases Reported
To the Michigan Department of Public Health

For the Four-Week Period Ending November 27, 1970

	1970 This 4-Week Period	1969 Same 4-Week Period	1970 Total To Above Date	1969 Total Same Date	Total Cases for 1969
Rubella	104	145	2,883	4,092	3,307
Congenital Rubella Syndrome	2	—	2	—	—
Measles	34	34	1,798	355	401
Whooping Cough	7	8	187	161	192
Diphtheria	—	—	—	—	—
Mumps	937	456	6,394	4,698	5,215
Scarlet Fever & Strep Sore Throat	958	927	10,265	8,384	9,763
Tetanus	2	1	8	5	6
Poliomyelitis (paralytic)	0	0	1	0	0
Hepatitis	331	332	4,153	3,017	3,360
Salmonellosis (other than S. typhi)	51	49	596	499	539
Typhoid Fever (S. typhi)	0	1	12	6	6
Shigellosis	20	34	194	285	300
Aseptic Meningitis	21	24	284	167	179
Encephalitis	8	8	142	114	120
Meningococcic Meningitis	4	6	65	103	114
H. Influenza Meningitis	12	4	51	50	56
Tuberculosis	136	150	1,828	1,948	2,108
Syphilis	289	312	3,529	3,779	4,021
Gonorrhea	1,459	1,414	18,881	17,610	19,194

Information can be supplied by the local health department on the local incidence of disease.

Maurice Reizen, M.D., Director
Michigan Department of Public Health

What shall we do *about drug addiction?*

By Norman Rosenzweig, MD
Detroit

Drug addiction began to become a sizeable social problem in the U.S. during the latter half of the nineteenth century, and reached an all time high around 1900, when there were an estimated 264,000 addicts (a figure several times the estimated number of addicts today). The figure is even more remarkable when we realize that the U.S. population in 1900 was less than half the current population.

Most addictions at the turn of the century were medicinally induced — i.e. — either created iatrogenically through the use of morphine injections by physicians to relieve pain, or as a consequence of taking any of a wide variety of opiate-containing patent medicines then freely available. Only a small proportion of the addicts were from the fringes of society, and these were mainly opium smokers — a habit picked up from the Chinese imported as railroad laborers.

The introduction of heroin occurred around this time. It was hailed as a safe substitute for morphine, three times as powerful, and, it was claimed, non-addictive. Indeed, it was even used in a manner similar to that of methadone today, as a "cure" for morphine addiction. While doctors tended to discontinue its use after they realized its highly addicting properties, the opium smokers shifted to heroin sniffing in large numbers. They discovered that heroin was easier to use than opium, worked faster, and was more potent, and it quickly became the drug of choice among the shadier elements.

During the early years of the present century, a vigorous campaign of education was undertaken. Physicians were much more careful in their use of narcotics, and the public was warned against indiscriminate use of medicines containing opiates. The passage of the Harrison Narcotic Act in 1914 imposed a tax upon the import or manufacture of narcotics, placing a greater restriction upon heroin.

The Uniform Narcotic Act made unauthorized sale or possession of narcotics a crime. By the early 1920's addicts were cut off from legal supplies of narcotics. Physicians were prohibited by law from dispensing narcotics to addicts.

The result was a sharp curtailment of the medicinally induced addictions, and the development of an illicit trade in heroin to maintain the addictions of the anti-social group. The absolute number of addicts decreased markedly, but it became an outlaw group.

Lawrence Kolb, M.D., now the chairman of the Department of Psychiatry at Columbia University, but then a physician with the U.S. Public Health Service, made extensive field studies of narcotic addiction. His findings demonstrated that addicts were emotionally unstable persons, and also that addiction does not cause criminal behavior (except as a means of gaining money to support a habit). His work led many to feel that imprisonment was not the answer to addiction, but that medical treatment was called for. In 1929 the U.S. Congress authorized two medical facilities to treat drug addicts. The result was the U.S. Public Health Service Hospital at Lexington, Ky. and another at Fort Worth, Texas. Both were opened in the 1930's, with the idea that addiction was an illness, and in the belief that they would be able to treat and rehabilitate addicted patients and return them as useful members to society.

Unfortunately, these early hopes were not realized. The experience of these hospitals demonstrated that while addicts could be withdrawn from drugs, they could not be cured. The recidivist rate among those treated at these facilities was close to 100%.

During the depression years of the thirties a new drug gained popularity — marijuana. This led to the enactment in 1937 of the marijuana tax laws at federal and state levels which made unauthorized sale or possession a crime.

During World War II addiction reached an all time low, probably because the underworld found it too difficult to obtain and smuggle narcotics. After the war the addiction rate rose until the early 1950's, and then again began to decline. This resurgence, while a mere fraction of the earlier problem, nevertheless led to the enactment in 1951, and again in 1956, of laws imposing even stricter penalties for unlawful sale, import or possession of narcotics or marijuana.

In 1965 the Drug Abuse Control Amendments were enacted, extending criminal penalties to unauthorized sale or manufacture of certain stimulant, depressant and hallucinogenic drugs. In response to a request from President Johnson, mere possession of LSD and other hallucinogens was also made a crime by Congress.

Doctor Rosenzweig is chairman, Department of Psychiatry, Sinai Hospital of Detroit.

"An important part of the difficulty has been the common public impulse to find simple solutions to complex problems."

By 1966 there was a reaction against the irrational imposition of harsh penalties, and the Narcotic Addict Rehabilitation Act was passed. This provided for civil commitment of addicts for treatment, in lieu of prosecution, despite the lack of evidence that cure or even rehabilitation of any but the very occasional addict was possible.

Thus the history of drug abuse legislation has been a series of ill considered, emotionally determined laws which grew out of moments of public hysteria, when the country either became alarmed by the drug problem and imposed criminal penalties to control it, or became alarmed at the harshness of the penalties it had imposed and retreated to the "therapeutic" approach. There has never been an overall review of these legislative approaches, though it is clear that neither punitive nor the rehabilitative approach has had any significant impact on the problem. Recent months have witnessed a new emotionalism, advocating the substitution of methadone for heroin as if it were a treatment approach. Despite a bandwagon tendency to establish methadone "clinics," no real impact on drug addiction has been noted.

An important part of the difficulty has been the common public impulse to find simple solutions for complex problems. The complexity of the drug addiction problem begins with its definition. If we stop to examine the matter, we quickly become aware that we are confronted not by one problem, but by many. Yet all have been subsumed under a common term, and this has led to searches for *the* solution to *the* drug problem. Indeed certain of the drug problems seem clearly to have been generated out of our efforts to deal with other drug problems.

We now recognize two important components of drug dependency: physiological and psychological. Certain drugs are known to produce a biological habituation which will give rise to sometimes severe somatic symptoms if intake levels of the drug are not maintained. Heroin, morphine, methadone, and other synthetic opiates fall into this category, as do the barbiturates. Marijuana, LSD and the stimulant drugs, however, do not produce tolerance nor are there true withdrawal symptoms. On the other hand, they may produce psychotoxic effects which may lead to bizarre or psychotic behavior. Alcohol is both addicting and psychotoxic.

Psychological dependence arises from a pleasurable or gratifying experience with a drug, and a desire to repeat that experience. This desire may be experienced with different degrees of urgency, varying with the person's personality and the particular drug used; but the notion of psychic dependence is generally reserved for desires of compulsive magnitude.

The problems posed by physiological addiction are minor in comparison to those related to psychological dependence. Were it not for the psychic demand for the drug experience, narcotic addicts could be readily withdrawn from drugs and truly "cured." Drug withdrawal is not a difficult medical problem, and can be accomplished without the use of substitute narcotic preparations. It does, however, require that the patient be hospitalized. Many thousands have been withdrawn from drugs at the USPHS hospitals at Lexington and Fort Worth and elsewhere, but this has not affected the prevalence of drug addiction. Almost everyone withdrawn from drugs at these hospitals has returned to drug use.

Why is this so? What is the nature of the drug experience being sought, and why is the addict psychologically driven to acquire it even in the absence of physiological demand? The typical heroin addict experiences a tingling sensation, especially in his abdomen, immediately following his "mainlining" the drug into a vein. His face flushes, and his pupils contract. The tingling soon passes, and he feels "fixed" — i.e. — everything is fine. His problems have been shut out and his anxieties quieted. Unless he has taken enough of the drug to make him somnolent or sick, he does not behave abnormally, nor is it easy to recognize that he is under the influence of an opiate.

In a way, the craving for a "fix" even when there is no physical dependence is comparable to the feeling of need experienced by anyone with a pleasure seeking habit, such as cigarette smoking. Those who have "quit" smoking several times are familiar with the recurrent urge to find again the remembered satisfaction, and the difficulty in resisting the temptation to resume smoking. But the need of the drug addict is even greater, and therefore even more difficult to resist.

Many studies of drug addicts leave no doubt that these individuals have severe personality problems of many kinds, of which addiction is only one symptom. Psychiatrists have long recognized the fruitlessness of trying to remove a symptom without at the same time resolving the underlying disorders. All efforts at psychiatric treatment of such personality difficulties, however, are dependent upon the positive motivation and cooperation of the patient. While no two addicts are alike, almost all of them are completely lacking in such motivation, hence are unwilling and/or unable to cooperate in psychiatric treatment or efforts at rehabilitation. The only approaches that have had even mild success have been those group efforts, modeled upon Alcoholics Anonymous, such as Synanon. Such self-help organizations utilize group reinforcement of individual motivation within the framework of a mystique. These efforts must be continued indefinitely to prevent recidivism, and are suitable only for a small number of addicts.

Addicts tend to be passive and dependent individuals who feel themselves to be without the inner resources necessary to cope with the problems and anxieties of living. Consequently they seek to avoid problems rather than to attempt to solve them. They are particularly prone to anxieties stemming from their sexual and aggressive impulses, and have an extremely low tolerance for anxiety or frustration.

Drugs reduce the sexual urge and take the edge off their aggressiveness. They provide the addict with a feeling of "ease and calm" which enables him to feel able to deal with the world, but so satisfied that he feels no need to do anything about his problems. Thus they are the ideal recourse for the person who feels unable to tolerate his tensions or cope with reality. Having found such a ready solution, the addicted personality is not at all likely to seek further alternatives. Though he has heard much of the dangers of drug taking, he carries an inner conviction that these consequences will not affect him, just as the cigarette smoker is able to deny that he will fall victim to cancer or heart disease despite his intellectual awareness of the dangers of smoking.

In the past, addicts have come from a small segment of the population that was most socially and economically deprived. At one time such people were mainly recent immigrants to the U.S. More recently, Negroes have replaced the foreign born. These people have a multitude of problems. They tend to live in the poorest, most crowded, and most dilapidated areas. They have minimal education and lack vocational skills. They tend to have more children than the average, who tend to be poorly cared for and neglected, with high rates of illegitimacy, high infant mortality, and many other health problems as well.

Children growing up in such a milieu tend to feel overwhelmed by the environmental pressures, and usually do not acquire the personality skills necessary to cope with life. Thus they tend to see themselves as helpless, at odds with society, yet dependent upon its handouts. They readily develop states of anomie. By the time they reach adolescence, if not before, they are ripe candidates for drug addiction.

More recently there have been an increasing number of juvenile drug addicts coming from the more affluent segments of society. For many of these, drug abuse represents an expression of adolescent rebellion and anti-establishmentarianism. They use drugs as an act of defiance of authority, because it is illegal to do so, in much the same way that their counterparts used alcohol during prohibition times. They tend to use marijuana to the greatest extent, particularly because of the feeling that the anti-marijuana laws are irrational and indicative of the social bankruptcy of the establishment. They also tend to experiment with the hallucinogens and stimulants. At times such experimentation leads to heroin addiction.

"Drugs are the ideal recourse for the person who feels unable to tolerate his tensions or cope with reality."

There is a particular segment of the affluent group which is especially susceptible to narcotic addiction. These are youngsters who have been over-indulged by their parents. The parents often have a need to intercede on behalf of the youngster, thus demonstrating their own power and the offsprings' weakness, helplessness and ineptitude. As a consequence, the children are deprived of the experiential learning necessary for developing competence and self reliance. Such children, like those from the poverty areas, tend to develop a sense of inadequacy in coping with life, and a feeling that problems can more readily be avoided than solved.

The more affluent addicts often have ready access to funds which enable them to buy sufficient drugs to maintain their habit. Those from the impoverished group, on the other hand, tend to resort to crime in order to obtain money to buy drugs. It has been estimated that in New York City alone, drug addicts spend between $500,000 and $700,000 per day for narcotics. Much of this money is obtained through burglary, shoplifting, prostitution, forgery, and other criminal pastimes.

This cash flow finds its way to the coffers of organized crime, who thus have a considerable financial incentive to maintain a high rate of addiction. They employ vigorous recruiting activities, often giving young novices their first doses free of charge until they are "hooked." Many adolescents support their own habits by "pushing" narcotics, and by recruiting their friends and classmates. They establish a group climate in the schools and elsewhere, to which adolescents are especially susceptible, which pressures the youngster to join in the drug taking in order to be accepted in the group, or else face social isolation and ridicule as "square" and "not with it."

It is almost impossible to enforce laws relating to consensual crimes. Unlike robbery, where a victim may be expected to give evidence against the culprit, the drug abuse laws define the willing victim as culprit. Hence, evidence for enforcement of narcotic laws must usually be obtained by entrapment. Even where prosecutions have been successful, they have affected only the most peripheral members of the narcotic establishment. The narcotic laws have been notoriously ineffective in dealing with the organized crime syndicates.

"The addict must be deromanticized; coping skills must be taught, and efforts at self-help supported."

Treating drug addiction as a medical rather than a legal problem has not been successful either, as noted above. Indeed, there is good evidence that defining addiction as a medical problem tends to discourage other efforts to deal with the problems, and hence may actually do more harm than good. In Detroit in the early 1950's, the city responded to the rise in drug addiction which occurred at that time by setting up a Mayor's Committee on Rehabilitation of the Narcotic Addict. This group seems to have been effective, over a period of around a year, in integrating the efforts of police, social agencies, youth agencies, schools, and churches. Then in July, 1952, an outpatient clinic was set up for addicts. The integrated community effort ceased, most responsible citizens being only too ready to turn this difficult problem over to the doctors. The clinic remained in operation for three years, processed over 500 cases, and reported almost total failure (Raskin, Petty & Warren, 1957).

What are the lessons to be learned from our past approaches to these complex problems?

(1) It is easier to prevent addiction than cure it. Vigorous social, economic, and educational efforts must be made with the populations at special risk for addiction. Already, projects like Operation Headstart and Model Cities provide entry points. Black militant groups such as the Black Muslims and Black Panthers have taken initiatives to discourage addiction among blacks. Indeed, they hold that the white establishment is a co-conspirator with organized crime in promoting ghetto addiction, claiming that narcotics would not be available in the ghetto but for the collusion of white police.

These efforts must be strengthened: the addict must be deromanticized, coping skills must be taught, and efforts at self help supported.

(2) All laws defining *use* of narcotics as a crime should be repealed. Physicians should be permitted to prescribe and administer opiates and their derivatives to addicts. This would make it unprofitable to maintain the illegal channels of distribution and would drive organized crime out of the drug traffic just as repeal of prohibition put an end to bootlegging.

(3) The redefinition of drug abuse in non-criminal terms would remove its appeal as a form of adolescent protest. The marijuana problem, for example, is a legal problem by definition. By changing the definition we can do much to solve the problem.

(4) Laws against illegal manufacture, import and sale of narcotics should be vigorously enforced.

(5) A vigorous propaganda campaign, via news media, TV, film, etc. geared to reach middle class and affluent social groups should be instituted to alter those child rearing practices which fail to provide experiential learning opportunities for coping with anxiety and reality.

(6) Physicians should cease their own contributions to the drug culture via promiscuous prescriptions of tranquilizers, mood elevators, etc.

Of these suggestions, that of law reform is most likely to arouse objections.

Repeal of these laws would be neither an advocacy nor sanction of drug abuse or drug addiction any more than repeal of the prohibition laws amounted to advocacy or sanctioning of the use of alcohol. Alcohol is recognized to be potentially dangerous for the user both in terms of mental impairment which may cause dangerous behavior such as automobile accidents, aggressive behavior, etc.; and in terms of a health hazard which may result in acute as well as chronic illness. The repeal of prohibition gave recognition to the fact that regardless of the consequences, certain people were bound to use alcohol; and that the effects of defining such use as illegal were far more harmful to the public good than were the harmful effects of legalizing alcohol.

While drug use is even more provocative of emotional reaction than is the use of alcohol, and consequently provokes greater resistance to change from a repressive approach, it must sooner or later become apparent to objective observers that the drug situation today is quite analogous to that of alcohol during prohibition. The widespread criminal drug distribution network, which is responsible for active recruiting of new addicts, exists only because drugs can be obtained solely through illegal channels. Removal of the legal restrictions will do no more to reduce the current addiction levels than repeal did to reduce alcoholism. Neither is it likely to increase the addiction rate any more than repeal increased the incidence of alcoholism. But repeal of the definition of drug use as illegal should result in the eradication of the criminal drug industry, just as repeal of prohibition resulted in the elimination of bootlegging and its consequences. Addicts could come to their doctors' offices for their needs, and would not have to purchase drugs from black market channels at prices so high that the addict is driven to commit crimes to raise the money for his habit.

Certainly, arguments favoring the restrictive drug use legislation now on the books cannot point to any success in reducing the size of the drug problem. Indeed, present narcotic laws are responsible for creating and maintaining the illegal black market, and thus probably contribute to greater addiction because of the recruiting efforts of the criminals. Repeal of these laws would dry up the market for illegal drugs and remove the incentive to recruit.

Society has certainly been inconsistent in its behavior towards things it considers harmful. Small arms which are used to commit violent crimes remain "legal" because of the intensive activities of the gun lobby; contribution to an alarming environmental pollution problem by dumping industrial waste into our lakes and streams or spewing noxious fumes into the air, is punishable by infinitesimal, meaningless fines; despite the overwhelming evidence of the harmfulness of cigarette smoking, current federal legislation prohibits the States from placing restrictions upon cigarette advertising. Yet amphetamines, barbiturates, and even tranquillizers are being driven into the black market by legal restrictions on these often valuable medications; and the magnitude of the penalties for possession of marijuana is so great that judges are reluctant to impose them, and thus are forced into the role of co-conspirators in violation of the law.

Until society is prepared to be more realistic in its legal approach, there will be no headway in coping with the narcotics addiction problems.

References

1. Anonymous: Heroin. Med. World News. 11:31 April 10, 1970.
2. Bobbitt, J. M.: The Drug Addiction Problem, Am. J. Med. 14:538, May, 1953.
3. Brill, L.: Community Approaches to the Addiction Problem Canadian Jour of Corrections 6:198, 1964.
4. Freedman, D. X.: Implications for Research, JAMA 206:1280, Nov. 4, 1968.
5. Krantz, S.: Deterrents to Drug Abuse: The Role of Law, JAMA 206:1276, Nov. 4, 1968.
6. Lichtenstein, G.: The Politics of Methadone Attitude, 1:2, Mar./Apr., 1970.
7. Raskin, H., Petty, T., & Warren, M.: A Suggested Approach to the Problem of Narcotic Addiction, Am. J. Psychiat 113:1089, June, 1957.
8. Raskin, H. A.: Rehabilitation of the Narcotic Addict, JAMA 189:956, Sept. 21, 1964.
9. Seevers, M. H., & Woods, L. A.: The Phenomena of Tolerance. Am. J. Med. 14:546, May, 1953.
10. Seevers, M. H.: Psychopharmacological Elements of Drug Dependence, JAMA 206: 1263, Nov. 4, 1968.
11. St. Souver, F.: Drug Abuse: A Guide for Parents & Teachers: Oakland County, Office of Thomas Plunkett, Prosecuting Attorney.
12. U. S. Dept. HEW, PHS.: Narcotic Drug Addiction-Mental Health Monograph 2, Pub. Health Service Publication #1021.
13. U.S. Dept. HEW, PHS: Rehabilitation in Drug Addiction: A Report on a Five Year Community Experiment of the New York Demonstration Center; Mental Health Monograph 3 Public Health Service Publication. #1013, 1963.
14. Wikler, A., & Rasor, R. W.: Psychiatric Aspects of Drug Addiction, Amer. J. Med. 14:566, May, 1953.

Viewpoints

Living with the practice of medicine

(The following article is reprinted with permission from the *Bulletin* of the Kalamazoo Academy of Medicine. Doctor Fopeano is editor of the *Bulletin.*)

By John V. Fopeano, M.D.
Kalamazoo

From all sides the health care professions are challenged to meet the demands of a sick society. It is probably true that doctors could do more to provide adequate care for the sick if they were not themselves so much a part of the sick society and therefore a part of the problem. A human being can stand only so much pain, physical or mental. Beyond a certain point, which varies with each individual, the sufferer resorts to some form of escape, which may or may not be appropriate or rational. So, too, physicians react when threatened by overwhelming demands of today's society.

Our leaders exhort our doctor to extend himself to meet the demands for more and better medical service and in addition to improve his performance as a quasi-public official, a citizen, educator, counselor, administrator, philanthropist, parent, husband, a person of some culture and guardian of his own health.

At some point, any human, consciously or unconsciously, will feel that this becomes ridiculous. He becomes over exposed to the problems of society and too painfully aware of his inadequacy to solve these problems. He shrinks from this confrontation and thereby becomes part of the problem.

It is remarkable that so many doctors adjust as well as they do. But many get into serious trouble in their efforts to avoid the stress. Some turn off their sensitivity to the demands of Society and limit their interests and efforts to those areas of professional work that are most vital to their peace of mind (probably their financial security). This is not satisfactory to the public and results in an eccentric physician, to state it mildly. Other doctors go to the opposite extreme and desperately attempt to meet every challenge. This often results in an overworked, anxiety ridden, frustrated person prone to the abuse of alcohol and drugs, often unsatisfactory as a spouse or parent. The gravity of the situation may be indicated by the relatively high rate of suicide among doctors.

There are enough examples of unwholesome reactions to excessive stress to warn us against allowing the public demand for service or our own compulsion for compassion or ambition for fame and fortune, to govern completely the priorities of our personal lives. True, we must recognize an indebtedness to society and try to do what is reasonable toward improving the lot of our fellow travelers in this troubled world but it seems unlikely that anything will be gained by the harassment of those who are working to capacity.

Each person must recognize his tolerance for mental and physical stress, adjust his schedule accordingly and then turn off his conscience when he goes to bed at night.

This is the art of living with the practice of medicine. — JVF

Michigan's medical assistants have pioneered twice

By Glenn E. Millard, M.D.
Detroit

Time was when the doctor's aides were a dime a dozen. A few were outstanding even when they started their job, then persevered and became outstanding in their field. Many were the reasons for the high attrition of the doctors' employees: marriage, babies, the frequent moves of young people, the transfer of the husband.

The medical employees in Michigan and Kansas were the first to form an organization (not a union). Some 21 years ago, their efforts were noticed by physicians and recognized and supported officially.

Most physicians and their societies recognized them for what they were; but there were doctors, yea, even medical societies that ignored and rejected them, yes, even "fired" them because "here was another union which we shall surely have to face."

Through the use of their energy, time, and money and to the sacrifice of some of their families' needs they persisted! To an outsider it all seems easily done, this welding of a group with similar interests. But it wasn't—and still isn't easy.

In several parts of the country about 15 years ago, a need arose to name and define these persons. Also needed, was a collective list of what their office functions were. They became officially "Medical Assistants," which meant those employed by a physician, having diverse duties. These duties could be broken into two vast separate divisions, clinical and administrative.

By this time the Medical Assistants' state and local societies and the local and state medical societies had more or less firm official relations.

Again Michigan pioneered. With a financial grant from the Kellogg Institute, and the help of the University of Michigan, a Set of Syllabi were developed formalizing the educational needs of medical assistants. The Syllabi are still relevant today, though some portions are brought up to date by the instructors.

The National Organization, The American Association of Medical Assistants (AAMA) was organized 13 years ago. As it got on its feet, it began to receive help from the American Medical Association. Its officers rapidly gained organizational "savvy" about their long range needs and goals. This includes scholarships, loans, national accreditation for educational programs, and certification for those who have completed their education. Their educational program was very recently approved by the Council on Medical Education of the American Medical Association.

Official American Association of Medical Assistants inspection of a school is now available on request by the college teaching the course. Some courses lead to an Associate Degree and/or can be applied toward a four year degree. The standards are high and to date only a few schools have passed. The number of Community Colleges, Junior Colleges and four year schools teaching Medical Assistants is rapidly increasing. Outlines and recommended texts are available for both the educational outline and for study toward the certification examinations. Those successful candidates receive a Certified Medical Assistant (CMA) degree and deserve great scholastic and monetary recognition. They may be certified in either the clinical or administrative sections or "dually" certified.

The Michigan State Medical Society's advisory committee hopes to give Michigan physicians more perspective in the current activities and relationships of our medical assistants from time to time. We shall try to project their future contributions to physician employers and to the public's health.

(Doctor Millard is chairman of the MSMS Advisory Committee to the Michigan State Medical Assistants Society.)

BRIGHTON HOSPITAL

A non-profit foundation

FOR ALCOHOLISM

Member, Michigan Hospital Association, American Hospital Association

A facility designed to rehabilitate and aid the compulsive drinker in arresting his addiction.

Brighton Hospital meets the standards established by the Michigan State Board of Alcoholism and is recommended by that Board.

12851 East Grand River
One block south of I-96 at Kensington Rd. Exit
four miles east of U.S. 23
Brighton, Michigan
ACademy 7-1211

(A 16-m.m. sound color film on Brighton Hospital is available for free loan to qualified groups.)

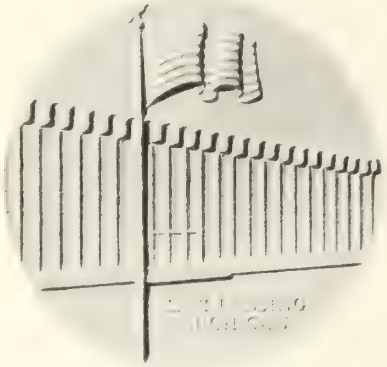
Council minutes

Extract of MSMS Council minutes; meeting of Nov. 4, 1970

MSMS REORGANIZATION—The Council authorized the chairman to appoint on an experimental basis three standing committees of The Council to serve in 1971 as reference committees. These are the Finance, County Societies, and Legislative Policy Committees. In addition, The Council authorized the chairman to appoint the traditional Publication Committee, which will no longer serve as a reference committee and will not meet each month, but only when it is thought necessary.

GOVERNMENT RELATIONS—The Council approved a guideline plan for the operation of the Department of Government Relations under which the Legal Affairs Committee will be continued in its traditional capacity, to make recommendations on legislative matters for Council approval. A new standing committee of The Council, the Legislative Policy Committee, will receive the recommendations of the Legal Affairs Committee and act as the implementing body, via the MSMS director and the departmental staff.

BLUE SHIELD—The Council decided to have a mail ballot sent to members of the MSMS House of Delegates, listing the members of the old Blue Shield board who could be considered for filling the 15 vacancies on the new Blue Shield board after restructuring is implemented. The Council also indicated that provision be made for selecting other than the members of the old board, and that the MSMS delegates be informed that at least six members of the old board must be included in their choice of 15 physicians. (Later, a Special Session was called.)



MACRO Study—The Council voted to have its chairman turn over to the proper committees and staff the study of evaluation of the health system in Michigan done by Macro Systems Co. of New York, so that an in-depth study and report could be made to The Council.

ALCOHOL-DRUG DEPENDENCE—The Council approved the recommendations of the Committee on Alcohol and Drug Dependence that MSMS convey to the director of the Michigan Department of Licensing and Regulations MSMS feelings that the proposed regulations to control the distribution of methadone and treatment programs, and the proposed amendments to the Uniform Narcotic Law to enable the State of Michigan to control the distribution of methadone and treatment programs, are premature at this time. The committee also recommended that controls for methadone maintenance and withdrawal programs be in the form of regulations and not legislative action.

1971 ANNUAL SESSION—The Council approved the recommendation of the Committee on Alcohol and Drug Dependence that the scientific program committee for the 1971 Annual Session be requested to consider the possibility of devoting a day, or at least a half-day, to the subject of substance abuse (obesity, smoking, alcohol and drugs.)

LEGISLATION—The Council referred the recommendation that MSMS go on record as favoring the passage of HB 4794, allowing treatment of juveniles without consent of parents, to the Legislative Policy Committee.

GROUP TRAVEL—A mail poll of The Council in October gathered approval for two future MSMS group travel plans: a March, 1971, trip to the South Pacific, and an October, 1971, trip to the Orient, and also gained support of having MSMS in 1971 specialize in longer trips, unique in nature, which require the sponsorship of a very large organization.

WCMS REQUEST—The Council authorized the MSMS legal counsel to draw up final documents for the establishment of a possible Wayne County Medical Society medical foundation, according to the county society's request. The legal counsel should have limited involvement in the preliminary discussions, The Council decided, and an MSMS staff person should be his personal representative at the early meetings.

MDPH Project—The Council authorized its chairman to reply to the Michigan Department of Public Health, recommending that the Current Procedural Terminology plus three digits for unit values be recommended to a Health Department team which has been named a subcontractor for the Medicaid management study for the Department of Social Services. The Council also authorized its chairman to approve the Health Department's recommendation that five MDs and two DOs be appointed, provided they represent geographic areas and specialties, to help the Health Department make recommendations regarding the establishment of screens and other matters.

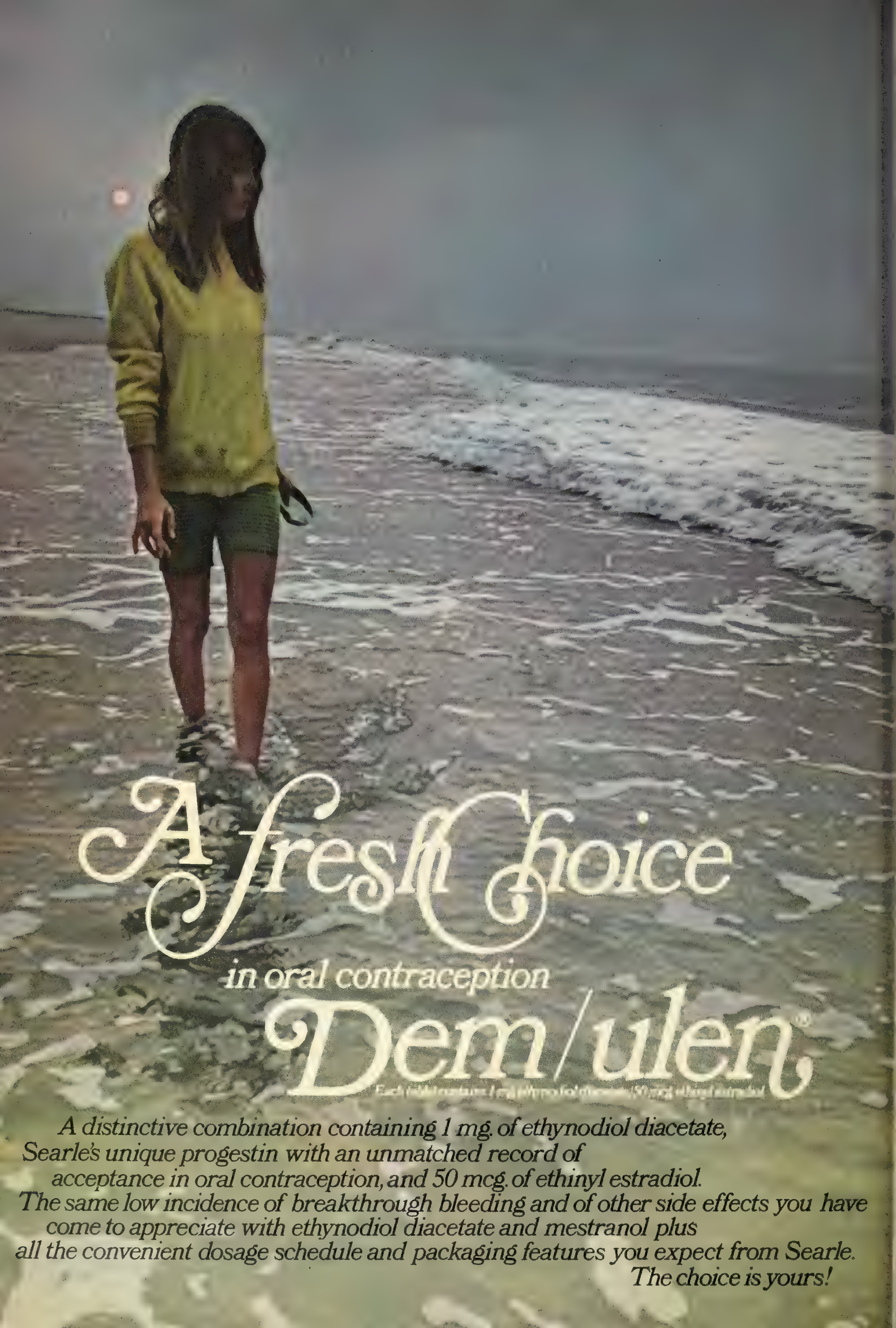
PROTEIN CONTENT / 7 oz. Serving*

Bean with Bacon	6.8	Green Pea with Ham (Frozen)	7.6
Beef	8.0	Hot Dog Bean	8.4
Chicken Broth	5.5	Pepper Pot	6.1
Chicken 'N Dumplings	5.8	Split Pea with Ham	10.2
Chili Beef	6.2	Vegetable Beef	5.0
Green Pea	6.9	Vegetable with Beef (Frozen)	5.4

When protein is the focal point in your patients' special diets, Campbell's Soups can be a convenient supplementary source of that essential nutrient.

* From "Nutritive Composition of Campbell's Products" which gives values of important nutritive constituents of all Campbell's Products. For your copy, write to Campbell Soup Company, Dept. 365, Camden, New Jersey 08101.

There's a soup
for almost every patient and diet
..for every meal
and, it's made by Campbell



A distinctive combination containing 1 mg. of ethynodiol diacetate,
Searle's unique progestin with an unmatched record of
acceptance in oral contraception, and 50 mcg. of ethinyl estradiol.
The same low incidence of breakthrough bleeding and of other side effects you have
come to appreciate with ethynodiol diacetate and mestranol plus
all the convenient dosage schedule and packaging features you expect from Searle.
The choice is yours!

A fresh Choice

in oral contraception

Demulen®

Each tablet contains 1 mg ethynodiol diacetate/50 mcg ethinyl estradiol

Actions—Demulen acts to prevent ovulation by inhibiting the output of gonadotropins from the pituitary gland. Demulen depresses the output of both the follicle-stimulating hormone (FSH) and the luteinizing hormone (LH).

Special note: Oral contraceptives have been marketed in the United States since 1960. Reported pregnancy rates vary from product to product. The effectiveness of the sequential products appears to be somewhat lower than that of the combination products. Both types provide almost completely effective contraception.

An increased risk of thromboembolic disease associated with the use of hormonal contraceptives has now been shown in studies conducted in both Great Britain and the United States. Other risks, such as those of elevated blood pressure, liver disease and reduced tolerance to carbohydrates, have not been quantitated with precision. Long-term administration of both natural and synthetic estrogens in subprimate animal species in multiples of the human dose increases the frequency of some animal carcinomas. These data cannot be transposed directly to man. The possible carcinogenicity due to the estrogens can be neither affirmed nor refuted at this time. Close clinical surveillance of all women taking oral contraceptives must be continued.

Indication—Demulen is indicated for oral contraception.

Contraindications—Patients with thrombophlebitis, thromboembolic disorders, cerebral apoplexy or a past history of these conditions, markedly impaired liver function, known or suspected carcinoma of the breast, known or suspected estrogen-dependent neoplasia and undiagnosed abnormal genital bleeding.

Warnings—The physician should be alert to the earliest manifestations of thrombotic disorders (thrombophlebitis, cerebrovascular disorders, pulmonary embolism and retinal thrombosis). Should any of these occur or be suspected the drug should be discontinued immediately.

Retrospective studies of morbidity and mortality in Great Britain and studies of morbidity in the United States have shown a statistically significant association between thrombophlebitis, pulmonary embolism, and cerebral thrombosis and embolism and the use of oral contraceptives. There have been three principal studies in Britain[1-3] leading to this conclusion, and one[4] in this country. The estimate of the relative risk of thromboembolism in the study by Vessey and Doll[3] was about sevenfold, while Sartwell and associates[4] in the United States found a relative risk of 4.4, meaning that the users are several times as likely to undergo thromboembolic disease without evident cause as nonusers. The American study also indicated that the risk did not persist after discontinuation of administration, and that it was not enhanced by long-continued administration. The American study was not designed to evaluate a difference between products. However, the study suggested that there might be an increased risk of thromboembolic disease in users of sequential products. This risk cannot be quantitated, and further studies to confirm this finding are desirable.

Discontinue medication pending examination if there is sudden partial or complete loss of vision, or if there is a sudden onset of proptosis, diplopia or migraine. If examination reveals papilledema or retinal vascular lesions medication should be withdrawn.

Since the safety of Demulen in pregnancy has not been demonstrated, it is recommended that for any patient who has missed two consecutive periods pregnancy should be ruled out before continuing the contraceptive regimen. If the patient has not adhered to the prescribed schedule the possibility of pregnancy should be considered at the time of the first missed period.

A small fraction of the hormonal agents in oral contraceptives has been identified in the milk of mothers receiving these drugs. The long-range effect to the nursing infant cannot be determined at this time.

Precautions—The pretreatment and periodic physical examinations should include special reference to the breasts and pelvic organs, including a Papanicolaou smear, since estrogens have been known to produce tumors, some of them malignant, in five species of subprimate animals. Endocrine and possibly liver function tests may be affected by treatment with Demulen. Therefore, if such tests are abnormal in a patient taking Demulen, it is recommended that they be repeated after the drug has been withdrawn for two months. Under the influence of progestogen-estrogen preparations preexisting uterine fibromyomas may increase in size. Because these agents may cause some degree of fluid retention, conditions which might be influenced by this factor, such as epilepsy, migraine, asthma, cardiac or renal dysfunction, require careful observation. In breakthrough bleeding, and in all cases of irregular bleeding per vaginam, nonfunctional causes should be borne in mind. In undiagnosed bleeding per vaginam adequate diagnostic measures are indicated. Patients with a history of psychic depression should be carefully observed and the drug discontinued if the depression recurs to a serious degree. Any possible influence of prolonged Demulen therapy on pituitary, ovarian, adrenal, hepatic or uterine function awaits further study. A decrease in glucose tolerance has been observed in a significant percentage of patients on oral contraceptives. The mechanism of this decrease is obscure. For this reason, diabetic patients should be carefully observed while receiving Demulen therapy. The age of the patient constitutes no absolute limiting factor, although treatment with Demulen may mask the onset of the climacteric. The pathologist should be advised of Demulen therapy when relevant specimens are submitted. Susceptible women may experience an increase in blood pressure following administration of contraceptive steroids.

Adverse reactions observed in patients receiving oral contraceptives—A statistically significant association has been demonstrated between use of oral contraceptives and the following serious adverse reactions: thrombophlebitis, pulmonary embolism and cerebral thrombosis.

Although available evidence is suggestive of an association, such a relationship has been neither confirmed nor refuted for the following serious adverse reactions; neuro-ocular lesions, e.g., retinal thrombosis and optic neuritis.

The following adverse reactions are known to occur in patients receiving oral contraceptives: nausea, vomiting, gastrointestinal symptoms (such as abdominal cramps and bloating), breakthrough bleeding, spotting, change in menstrual flow, amenorrhea during and after treatment, edema, chloasma or melasma, breast changes (tenderness, enlargement and secretion), change in weight (increase or decrease), changes in cervical erosion and cervical secretions, suppression of lactation when given immediately post partum, cholestatic jaundice, migraine, rash (allergic), rise in blood pressure in susceptible individuals and mental depression.

Although the following adverse reactions have been reported in users of oral contraceptives, an association has been neither confirmed nor refuted: anovulation post treatment, premenstrual-like syndrome, changes in libido, changes in appetite, cystitis-like syndrome, headache, nervousness, dizziness, fatigue, backache, hirsutism, loss of scalp hair, erythema multiforme, erythema nodosum, hemorrhagic eruption and itching.

The following laboratory results may be altered by the use of oral contraceptives: hepatic function: increased sulfobromophthalein retention and other tests; coagulation tests: increase in prothrombin, Factors VII, VIII, IX and X; thyroid function: increase in PBI and butanol extractable protein bound iodine, and decrease in T^3 uptake values; metyrapone test and pregnanediol determination.

References: 1. Royal College of General Practitioners: Oral Contraception and Thrombo-Embolic Disease, J. Coll. Gen. Pract. *13*: 267-279 (May) 1967. *2.* Inman, W. H. W., and Vessey, M. P.: Investigation of Deaths from Pulmonary, Coronary, and Cerebral Thrombosis and Embolism in Women of Child-Bearing Age, Brit. Med. J. *2*:193-199 (April 27) 1968. *3.* Vessey, M. P., and Doll, R.: Investigation of Relation Between Use of Oral Contraceptives and Thromboembolic Disease. A Further Report, Brit. Med. J. *2*:651-657 (June 14) 1969. *4.* Sartwell, P. E.; Masi, A. T.; Arthes, F. G.; Greene, G. R., and Smith, H. E.: Thromboembolism and Oral Contraceptives: An Epidemiologic Case-Control Study, Amer. J. Epidem. *90*:365-380 (Nov.) 1969. 0A4

SEARLE **Where "The Pill" Began**
G. D. Searle & Co., P.O. Box 5110, Chicago, Illinois 60680

Mylanta®
24 million hours a day.

Through the day, every day,
ulcer patients take
one million doses of Mylanta
for relief of ulcer pain.

Mylanta®
LIQUID/TABLETS
aluminum and magnesium hydroxides plus simethicone

Good taste = patient acceptance
Relieves G.I. gas distress*
Non-constipating

*with the defoaming action of simethicone

Stuart PHARMACEUTICALS Pasadena, Calif. 91109
Division of Atlas Chemical Industries, Inc., Wilmington, Del. 19899

The girth control pill

Tepanil® Ten-tab
(continuous release form)
(diethylpropion hydrochloride)

works on the appetite
not on the 'nerves'

Vhen girth gets out of control, TEPANIL can provide sound upport for the weight control program you recommend. EPANIL reduces the appetite—patients enjoy food but eat ess. Weight loss is significant—gradual—yet there is a rela-
ively low incidence of CNS stimulation.

ontraindications: Concurrently with MAO inhibitors, in patients hypersensitive to is drug; in emotionally unstable patients susceptible to drug abuse.
Varning: Although generally safer than the amphetamines, use with great caution in atients with severe hypertension or severe cardiovascular disease. Do not use durg first trimester of pregnancy unless potential benefits outweigh potential risks.
dverse Reactions: Rarely severe enough to require discontinuation of therapy, unleasant symptoms with diethylpropion hydrochloride have been reported to occur relatively low incidence. As is characteristic of sympathomimetic agents, it may ccasionally cause *CNS effects* such as insomnia, nervousness, dizziness, anxiety, and jitteriness. In contrast, CNS depression has been reported. In a few epileptics an increase in convulsive episodes has been reported. Sympathomimetic *cardiovascular effects* reported include ones such as tachycardia, precordial pain, arrhythmia, palpitation, and increased blood pressure. One published report described T-wave changes in the ECG of a healthy young male after ingestion of diethylpropion hydrochloride; this was an isolated experience, which has not been reported by others. *Allergic phenomena* reported include such conditions as rash, urticaria, ecchymosis, and erythema. *Gastrointestinal effects* such as diarrhea, constipation, nausea, vomiting, and abdominal discomfort have been reported. Specific reports on the hematopoietic system include two each of bone marrow depression, agranulocytosis, and leukopenia. A variety of miscellaneous adverse reactions have been reported by physicians. These include complaints such as dry mouth, headache, dyspnea, menstrual upset, hair loss, muscle pain, decreased libido, dysuria, and polyuria.
Convenience of two dosage forms: TEPANIL Ten-tab tablets: One 75 mg. tablet daily, swallowed whole, in midmorning (10 a.m.); TEPANIL: One 25 mg. tablet three times daily, one hour before meals. If desired, an additional tablet may be given in midevening to overcome night hunger. Use in children under 12 years of age is not recommended.

T-006A / 1/70 / U.S. PATENT NO. 3,001,910

THE NATIONAL DRUG COMPANY
DIVISION OF RICHARDSON-MERRELL INC.
PHILADELPHIA, PENNSYLVANIA 19144

Painful night leg cramps...

unwelcome bedfellow for any patient—including those with arthritis, diabetes or PVD

One thing patients can sleep without, particularly patients with chronic disease conditions such as arthritis, diabetes or PVD, is painful night leg cramps. Although seldom the presenting complaint, night leg cramps can tie your patients up in painful knots. Now, just one tablet of QUINAMM at bedtime can usually bring an end to shattered sleep and needless suffering. Your patients will sleep restfully—gratefully—with QUINAMM, specific therapy to prevent painful night leg cramps.

Prescribing Information—Composition: Each white, beveled, compressed tablet contains: Quinine sulfate, 260 mg., Aminophylline, 195 mg. **Indications:** For the prevention and treatment of nocturnal and recumbency leg muscle cramps, including those associated with arthritis, diabetes, varicose veins, thrombophlebitis, arteriosclerosis and static foot deformities. **Contraindications:** QUINAMM is contraindicated in pregnancy because of its quinine content. **Precautions/Adverse Reactions:** Aminophylline may produce intestinal cramps in some instances, and quinine may produce symptoms of cinchonism, such as tinnitus, dizziness, and gastrointestinal disturbance. Discontinue use if ringing in the ears, deafness, skin rash, or visual disturbances occur. **Dosage:** One tablet upon retiring. Where necessary, dosage may be increased to one tablet following the evening meal and one tablet upon retiring. **Supplied:** Bottles of 100 and 500 tablets.

THE NATIONAL DRUG COMPANY
DIVISION OF RICHARDSON-MERRELL INC.
PHILADELPHIA, PENNSYLVANIA 19144

Quinamm™ Specific therapy for night leg cramps
(quinine sulfate 260 mg., aminophylline 195 mg.)

Q915A

Michigan
Supreme Court
Hands Down
Decision

Important Malpractice Case Goes Against Two Physicians

By A. Stewart Kerr
Detroit

The Michigan Supreme Court decided in NACCARATO v. GROB AND KREVSKY on November 12, 1970. I have discussed the case with the lawyers who represented the defendants and have reviewed the Supreme Court briefs. This case is another step in the development of Michigan law imposing more stringent duties and greater liability on the medical profession.

The infant-plaintiff claimed that a ferric chloride test for PKU should have been administered and diet treatment started by one local pediatrician in July, 1959 and by another pediatrician in February, 1960. On those dates this plaintiff was 17 months and 2 years of age, respectively.

The expert witnesses presented by plaintiff were renowned experts on PKU. One of them had never engaged in the private practice of medicine. The other had been in private practice for 6 months in 1954 immediately following completion of his residency. The rest of their medical experience was in research work and in connection with clinics devoted to work with mentally retarded children.

Expert #1 denied that he had personal knowledge of the practice of pediatricians in the Detroit area in 1959 and 1960; however, he said that any certified pediatrician, resident or intern who had a patient in the hospital in 1960 for "mental retardation workup" would have administered a ferric chloride test. Except for that statement, his testimony was entirely favorable to defendants.

Expert #2 claimed personal knowledge of the Detroit area practice. He based his claim on his familiarity with the practice in large metropolitan communities in which there were active PKU research and treatment centers. He then assumed that such centers did exist in the Detroit area and named institutions which he assumed were participating in these programs. There was no evidence that any of these institutions were engaged in any comparable activities. There was testimony by the head of one of them to the contrary and testimony by three local pediatricians that testing for PKU was not being done by the doctors in this area and that it was not the usual practice here to administer diet treatment.

There was evidence that the institution with which expert #1 was affiliated was engaged in a PKU research program in the Chicago area and evidence that there were three research programs being conducted in California.

The testimony showed that an article by expert #1 and others had been published in February, 1958, reviewing a research project with the conclusion that benefits from diet treatment were not established and that detrimental effects of the treatment for children who had attained the age of 3 years outweighed any possible advantages. In July, 1960 there was published a compilation of the results of all of the reports of diet treatment of infants which had appeared in the medical literature prior to that date. The total number of such prior reports was 45. This compilation was referred to by all of the expert witnesses as the first significant presentation of benefits from the diet.

About two months after the last mentioned publication, the plaintiff was returned to the doctor who had seen him in July, 1959. On this return visit a ferric chloride test showed evidence of PKU which was confirmed. Diet treatment was prescribed and later the diet was continued under the supervision of University Hospital, Ann Arbor.

It has been necessary, in Michigan, for the plaintiff in these cases to prove that the defendant doctor violated the applicable standard of medical practice under the circumstances. The applicable standard is conformity with the usual practice of the doctors in the community under similar circumstances. Obviously, testimony was necessary from someone having knowledge to establish the usual practice before there could be any basis for determining that it had been reached. In this case the trial court held that neither of plaintiff's witnesses had exhibited that they were possessed of knowledge of the practice in the Detroit area or similar communities. A judgment was entered in favor of the defendants. This was affirmed on the same ground by the Michigan Court of Appeals, an intermediate appellate tribunal. The case was carried to the Michigan Supreme Court and the judgment was reversed on the ground that plaintiff's experts did have suffi-

CONSTIPATION
EVACUATE GENTLY

With EVAC-U-GEN — your patients with functional constipation can evacuate gently. Because EVAC-U-GEN has a mild laxative action and tends to cause the stool to be soft — it is highly desirable for those sensitive to harsh laxatives — particularly children, pregnant women, and geriatric patients. Recommend EVAC-U-GEN for the management of functional constipation. It is highly effective. Non-griping. Chewable. Very palatable. Economical.

EVAC-U-GEN®

A highly-flavored and palatable tablet of yellow phenolphthalein, bismuth subcarbonate, bismuth subgallate in special base. Chewable. Bottles of 35 and 100. Adult Dose: Chew 1 or 2 tablets night or morning. Children (up to age 10): 1/2 tablet. A citrus drink taken with tablet will stimulate action.
PRECAUTION: Do not use when symptoms of appendicitis are present and discontinue use if skin rash appears. Dependence on laxatives can result from continued use.

W-C
PRECISION PHARMACEUTICALS

SEND FOR SAMPLES.
WALKER, CORP & CO., INC.
Syracuse, New York 13201

cient knowledge of the local practice to qualify as competent witnesses on that subject. It is this determination which is of importance.

Expert #1 had admitted that he did not have knowledge of the Michigan practice. Expert #2 had admitted in effect that he did not have knowledge of the Michigan practice unless certain specified conditions existed. The testimony showed that these conditions did not exist; therefore, he also was without knowledge of the Michigan practice. The implication seems to be that if there is a treatment or procedure which is beneficial it becomes the duty of Michigan practitioners to adopt it and they are guilty of malpractice if they fail to do so.

This rule does apply to established procedures, such as certain abdominal surgery in Michigan, anesthesia procedures, cataract removal, etc., elsewhere. In other words, a local failure to adopt universal or nationwide practices cannot be justified simply because the doctors in the area fail to keep up with scientific developments or arbitrarily reject those which are widely accepted. The present case does not fall within that category. The Court's opinion seems to leave to courts and juries the privilege of deciding whether and when research and experimental work has progressed to a point that it should be adopted by the medical profession for administration to patients. That is contrary to the long-standing rule of law that "laymen, judges, jurors and lawyers, are without the necessary knowledge, training and experience" to decide the medical practice to be followed.

The case is a departure from the rule that the professional determination is evidenced by the actual practice of the members of the profession. It seems to overlook the differences which exist between private practice in the field and clinical practice under multi-personnel supervision as well as the differences between the services performed by the private practitioner and the doctors engaged in research. Protection of the public requires professional judgment based on long, intensive, scientific investigation for adoption of proposed innovations in the practice of medicine. To the extent that doctors may be called upon to use new procedures before the professional judgment has determined their effects, the patients may suffer.

An application for rehearing of this case has been filed on behalf of the defendant doctors. Rehearings are usually not granted, but the medical profession is entitled to wish success for this petition. As the matter presently stands, Michigan practitioners are now more substantially exposed to malpractice suits then heretofore.

Mr. Kerr serves as legal counsel for MSMS.

About doctors

William G. Birch, M.D., Kalamazoo, will take office Jan. 27 as president of the South Central Michigan Health Planning Council. He will be installed at the group's annual meeting in Kalamazoo and will serve one year.

Horace Bradfield, M.D., Detroit, was re-elected trustee of Wayne County Community College in the November elections.

J. C. Breneman, M.D., Galesburg, is again president of Allergy, Immunology International. He was re-elected recently to serve during 1971 as head of the three-year-old organization to study allergic and immunologic problems and advances through the world.

Nicholas Cherup, M.D., Bloomfield Hills, has been named physician of the year by the Kenny-Michigan Rehabilitation Foundation. Doctor Cherup is director of the Kenney-Michigan Rehabilitation Center at Pontiac General Hospital.

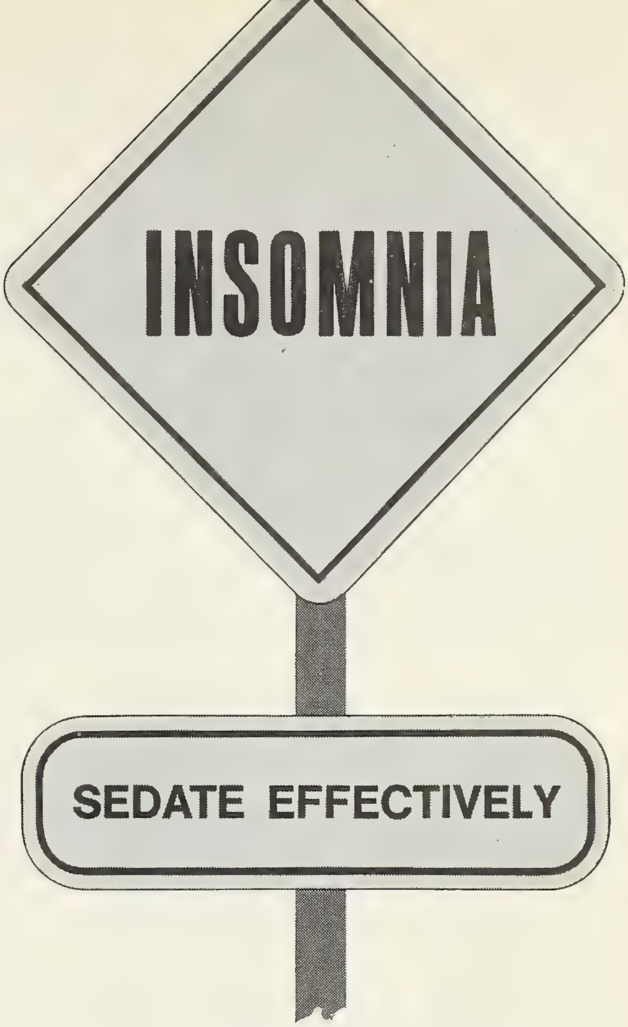
Ralph R. Cooper, M.D., Detroit, has been appointed by Governor William Milliken to the State Health Planning Advisory Council.

Winthrop N. Davey, M.D., Ann Arbor, professor of internal medicine at the University of Michigan Medical School, is serving on the National Heart and Lung Advisory Council of the National Heart and Lung Institute. He was appointed to serve a term running through September, 1973.

Lionel L. Davis, M.D., Mt. Pleasant, received a scroll recognizing his diligent work in the medical profession for the new Isabella County Medical Care Facility and for the people of the community. The scroll was presented at the facility dedication by the facility auxiliary president.

Frank J. Detterbeck, M.D., Howell, has been appointed superintendent of Howell State Hospital by E. Gordon Yudashkin, M.D., director, Michigan Department of Mental Health.

Watson A. Gilpin, M.D., Bloomfield Hills, is new president of the Michigan Chapter of the American College of Chest Physicians. Serving



With QUĪ-A-ZONE — you can sedate effectively. A balanced combination of short, intermediate, and long-acting barbiturates (totaling 100 mg.) in a rapidly disintegrating tablet — sedation is provided within a few minutes . . . followed by sound restful sleep . . . usually without morning hangover. The four barbiturates in QUĪ-A-ZONE have dual channels of elimination (renal and hepatic) to lessen metabolic burden, decrease barbiturate retention, and minimize depression.

QUĪ-A-ZONE™

Each rapidly-disintegrating tablet contains 25 mg. secobarbital, 25 mg. pentobarbital, 25 mg. butabarbital, and 25 mg. phenobarbital. Bottles of 100.
Usual Adult Dose: 1 to 2 tablets before retiring.
PRECAUTION: Should not be administered to patients sensitive to barbiturates, or in cases of known previous addiction. Warning: May be habit forming.

W-C PRECISION PHARMACEUTICALS

SEND FOR SAMPLES.
WALKER, CORP & CO., INC.
Syracuse, New York 13201

with him are Eugene Plous, M.D., Detroit, vice president, and W. Paul Reagan, M.D., secretary-treasurer.

Edward A. Jones, Jr., M.D., Grand Rapids, received the Floyd H. Skinner Memorial Award from the Grand Rapids NAACP for leadership in the cause of civil rights. He was cited especially for helping organize an outpatient health care facility at St. Mary's Hospital, Grand Rapids, and as president of Freedom Homes, Inc., there.

Karl S. Klicka, M.D., Wayne, has been honored for his "outstanding contributions to health care" in Michigan by a joint resolution approved by the Senate and the House of Representatives. Doctor Klicka is executive director of the Peoples Community Hospital Authority of southeast Michigan.

Michael C. Kozonis, M.D., Pontiac, is new vice president of the American Heart Association in charge of the North Central Region. Doctor Kozonis will serve one year and becomes chairman of the North Central Regional Heart Committee.

Norman F. Miller, M.D., Ann Arbor, professor emeritus at the University of Michigan, was one of three outstanding Michigan graduates to receive the Distinguished Alumni Award of the Medical Center Alumni Society recently.

Richard W. Prior, M.D., Flint, is new president of the Michigan Industrial Medical Association. He is medical director of the Chevrolet Flint Engine and Metal Fabricating Divisions of General Motors in Flint.

Herbert E. Sloan, Jr., M.D., Ann Arbor, is new head of the section of thoracic surgery at the University of Michigan Medical Center.

Walter F. Strempek, M.D., Lansing, has been named chief of the division of Chronic Disease Control of the Michigan Bureau of Community Health.

Myron E. Wegman, M.D., Ann Arbor, dean of the University of Michigan's School of Public Health, has been named president-elect of the American Public Health Association. Doctor Wegman is currently chairman of the APHA's executive board.

Brief Summary of Prescribing Information–9-9/22/69. For complete information consult Official Package Circular.
Indications: Essential hypertension. Use cautiously in patients with renal insufficiency, particularly if they are digitalized.
Contraindications: Anuria, oliguria, active peptic ulceration, ulcerative colitis, severe depression or hypersensitivity to its components contraindicates the use of Salutensin.
Warnings: Small-bowel lesions (obstruction, hemorrhage, perforation and death) have occurred during therapy with enteric-coated formulations containing potassium, with or without thiazides. Such potassium formulations should be used with Salutensin only when indicated and should be discontinued immediately if abdominal pain, distension, nausea, vomiting or gastrointestinal bleeding occurs. Use cautiously, and only when deemed essential, in fertile, pregnant or lactating patients. *Use in Pregnancy:* Thiazides cross the placenta and can cause fetal or neonatal hyperbilirubinemia, thrombocytopenia, altered carbohydrate metabolism and possibly electrolyte disturbances. Fatal reactions may occur with reserpine during electroshock therapy; discontinue Salutensin 2 weeks before such therapy. Increased respiratory secretions, nasal congestion, cyanosis and anorexia may occur in infants born to reserpine-treated mothers.
Precautions: Azotemia, hypochloremia, hyponatremia, hypochloremic alkalosis and hypokaliemia (especially with hepatic cirrhosis and corticosteroid therapy) may occur, particularly with pre-existing vomiting and diarrhea. Potassium loss or protoveratrine A may cause digitalis intoxication. *Potassium loss responds to potassium-rich foods, potassium chloride or, if necessary, discontinuation of therapy. Stop therapy if protoveratrine A induces digitalis intoxication.* Serum ammonia elevation may precipitate coma in precomatose hepatic cirrhotics. Discontinue therapy 2 weeks before surgery or if myocardial irritability, progressive azotemia or severe depression occur. Exercise caution in patients with chronic uremia, angina pectoris, coronary thrombosis or extensive cerebral vascular disease *or bronchial asthma* and in those with a history of peptic ulceration or bronchial asthma; in post-sympathectomy patients; in patients on quinidine; and in patients with gallstones, in whom biliary colic may occur. Patients who have diabetes mellitus or who are suspected of being prediabetic should be kept under close observation if treated with this agent.
Adverse Reactions: Hydroflumethiazide: Skin rashes (including exfoliative dermatitis), skin photosensitivity, urticaria, necrotizing angiitis, xanthopsia, granulocytopenia, aplastic anemia, orthostatic hypotension (potentiated with alcohol, barbiturates or narcotics), allergic glomerulonephritis, acute pancreatitis, liver involvement (intrahepatic cholestatic jaundice), purpura plus or minus thrombocytopenia, hyperuricemia, hyperglycemia, glycosuria, malaise, weakness, dizziness, fatigue, paresthesias, muscle cramps, skin rash, epigastric distress, vomiting, diarrhea and constipation. *Reserpine:* Depression, peptic ulceration, diarrhea, Parkinsonism, nasal stuffiness, dryness of the mouth, weight gain, impotence or decreased libido, conjunctival injection, dull sensorium, deafness, glaucoma, uveitis, optic atrophy, and, with overdosage, agitation, insomnia and nightmares. *Protoveratrine A:* Nausea, vomiting, cardiac arrhythmia, prostration, blurring vision, mental confusion, excessive hypotension and bradycardia. (Treat bradycardia with atropine and hypotension with vasopressors.)
Usual Dose: 1 tablet b.i.d.
Supplied: Bottles of 60, 600, and 1000 scored 50 mg. tablets.

Salutensin®
hydroflumethiazide, 50 mg./reserpine, 0.125 mg. protoveratrine A, 0.2 mg.

BRISTOL
BRISTOL LABORATORIES
Division of Bristol-Myers Company
Syracuse, New York 13201

The antihypertensive therapy that is easy to live with.*

When successive blood pressure readings confirm essential hypertension, consider Salutensin for:

Easy-to-live-with control. Gradual reduction of blood pressure leading to decisive, comfortable control is the common clinical response.

*Salutensin is usually well-tolerated (however, serious side effects can occur; see adjacent column for brief summary of prescribing information).

Easy-to-live with dosage. Two tablets a day usually achieves control. One to two tablets a day often maintains control without need for additional antihypertensive agents.

Easy-to-live with cost of therapy. The one to two tablets a day maintenance dose makes Salutensin economical to stay with. Important, because long-term control calls for long-term therapy.

Salutensin®

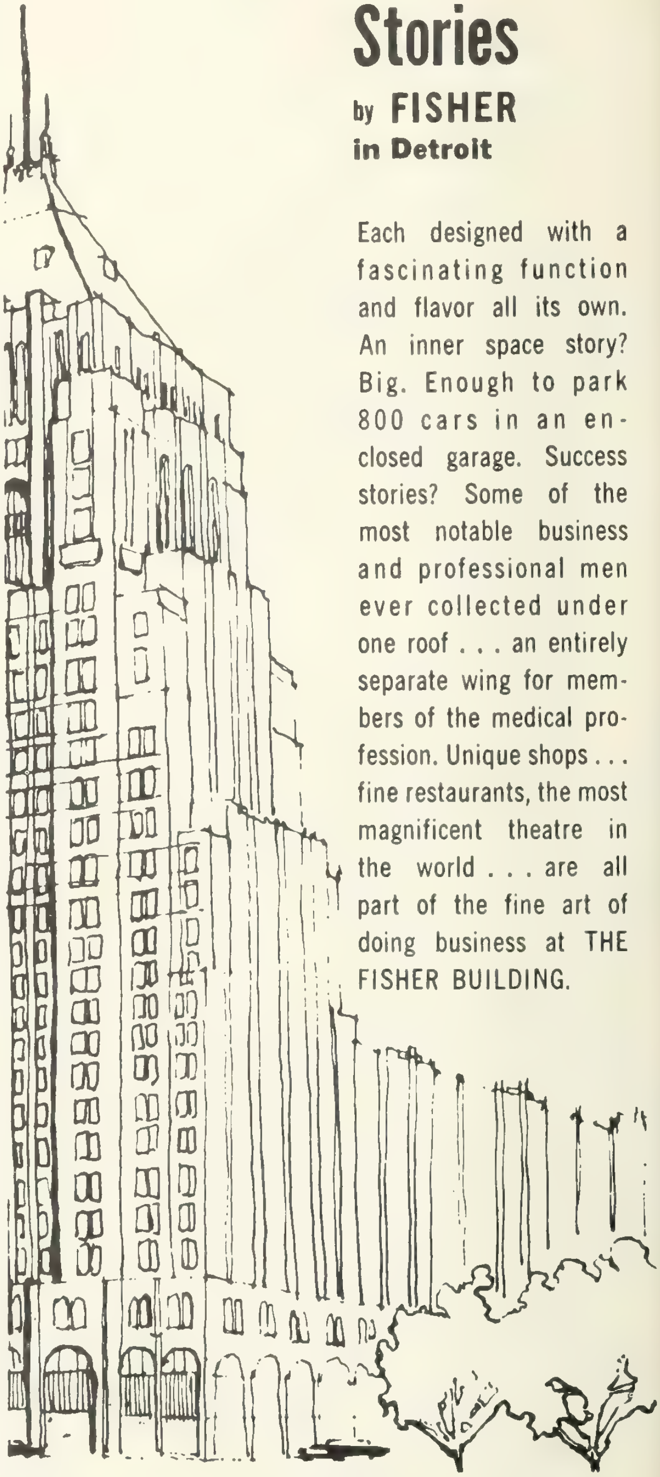
hydroflumethiazide, 50 mg./reserpine, 0.125 mg. protoveratrine A, 0.2 mg.

MSMS news

1970-71 Leaders Of MSMS Sections

Allergy and Applied Immunology
Leonard L. DiLella, M.D., Detroit
Anesthesiology
Thomas J. DeKornfeld, M.D., Ann Arbor
Dermatology
Russell G. Graff, M.D., Grand Rapids
Gastroenterology
Eugene A. Gelzayd, M.D., Southfield
General Practice
Leon Rottenberg, M.D., Detroit
Internal Medicine
Bernard J. Goldman, M.D., Mt. Clemens
Neurology
Ernst A. Rodin, M.D., Detroit
Neurological Surgeons
Frederick R. Latimer, M.D., Detroit
Obstetrics-Gynecology
Charles C. Vincent, M.D., Detroit
Occupational Medicine
Lambertus Mulder, M.D., Muskegon
Ophthalmology
David C. Boyce, M.D., Grand Rapids
Orthopedic Surgery
William S. Smith, M.D., Ann Arbor
Otolaryngology
John W. Griff, M.D., Bay City
Pathology
Leo W. Walker, M.D., Lansing
Pediatrics
William F. Howatt, M.D., Ann Arbor
Physical Medicine
Nicholas Cherup, M.D., Bloomfield Hills
Plastic Surgery
Alexander P. Kelly, M.D., Detroit
Proctology
James P. Muldoon, M.D., Grand Rapids
Psychiatry
Raymond W. Waggoner, M.D., Ann Arbor
Public Health and Preventive Medicine
John L. Isbister, M.D., Lansing
Radiology
Robert A. Songe, M.D., Dearborn
Surgery
Michael N. Zelenock, M.D., Southgate
Thoracic Surgery
Conrad R. Lam, M.D., Detroit
Urology
James M. Pierce, Jr., M.D., Detroit

**28
Tall
Stories**
by **FISHER**
in Detroit



Each designed with a fascinating function and flavor all its own. An inner space story? Big. Enough to park 800 cars in an enclosed garage. Success stories? Some of the most notable business and professional men ever collected under one roof . . . an entirely separate wing for members of the medical profession. Unique shops . . . fine restaurants, the most magnificent theatre in the world . . . are all part of the fine art of doing business at THE FISHER BUILDING.

Call or write the Rental Office
THE FISHER BUILDING
Across from the General Motors Bldg.
Detroit, Mich. 48202 (313)874-4444

MSMS Committee Warns Physicians Against Stockpiling Drugs

The MSMS Liaison Committee with the Michigan State Pharmaceutical Association recently received a letter from a county pharmaceutical association complaining that physicians are retaining over-supplies of drugs in their offices which results in increased burglaries of physicians' offices.

The Committee recognizes the right and necessity of physicians to maintain adequate drug stocks for office dispensing but that retaining the minimum quantities of stimulants, depressants, and narcotics necessary to his practice could reduce thefts and prevent these drugs from reaching the illegitimate market.

The Federal Bureau of Narcotics and Dangerous Drugs reports that during 1969 there were 2,494 thefts totalling 180.26 kilograms of narcotics and 733.41 kilograms of dangerous drugs.

Section 151.571 of Regulations No. 5 issued by the U. S. Department of Justice requires that "narcotic drugs and preparations shall at all times be properly safeguarded and securely kept. . . ." Doctors of medicine who keep stocks of narcotic drugs must be constantly on the alert, and vigilance must be exercised to secure the proper safeguard on storage of narcotic drugs.

Physicians seeking standards for safeguarding narcotics of various classes should request Bureau Order No. 213 from the Treasury Department, Bureau of Narcotics, Washington, D. C. 20226.

Medical Staffs Urged to Be Present During Accreditation Surveys

The Michigan delegates to the AMA call special attention to the recent action by the AMA Board of Trustees which urged county medical societies and hospital staffs "to encourage local practicing physicians to be present, at the invitation of the medical staff, when the Joint Commission on Accreditation of Hospitals is conducting its surveys."

AMA delegates suggest that such increased involvement would be "another move to open the door to improved liaison and understanding."

Before prescribing, please consult complete product information, a summary of which follows:
INDICATION: Relief of insomnia of varied etiology.
CONTRAINDICATIONS: Patients with known hypersensitivity to the drug.
WARNINGS: Caution patients about combined effects with alcohol and other CNS depressants. Caution against hazardous occupations requiring complete mental alertness, such as operating machinery or driving a motor vehicle shortly after ingesting the drug.
Physical and Psychological Dependence: Physical and psychological dependence rarely reported. If withdrawal symptoms do occur they may resemble those associated with withdrawal of barbiturates and should be treated in the same fashion. Use caution in administering to individuals known to be addiction-prone or those whose history suggests they may increase the dosage on their own initiative. Repeat prescriptions should be under adequate medical supervision.
Usage in Pregnancy: Weigh potential benefits in pregnancy, during lactation, or in women of childbearing age against possible hazards to mother and child.
PRECAUTIONS: If sleeplessness is pain-related, an analgesic should also be prescribed. Perform periodic blood counts if used repeatedly or over prolonged periods. Total daily intake should not exceed 400 mg, as greater amounts do not significantly increase hypnotic benefits.
ADVERSE REACTIONS: At recommended dosages, there have been rare occurrences of morning drowsiness, dizziness, mild to moderate gastric upset (including diarrhea, esophagitis, nausea and vomiting), headache, paradoxical excitation and skin rash. There have been a very few isolated reports of neutropenia and thrombocytopenia; however, the evidence does not establish that these reactions are related to the drug.

ROCHE Roche
LABORATORIES
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

one capsule for the rest of the night

Noludar® 300
(methyprylon)

Gone with the wind

The gas/acid group of disorders

"The two most common complaints referable to the upper gastrointestinal tract for which patients seek medical relief are hyperacidity and 'gas.' The two often occur together."*

Frees captured gas...neutralizes free acid

Silain-Gel Tablets and Liquid are separate formulas designed to provide equivalent dual-action symptomatic relief. Both dosage forms contain simethicone which effectively frees trapped gas, enabling the patient to eliminate it. Magnesium hydroxide in both assures a rapid rise in pH for prompt relief of hyperacidity. The special co-dried aluminum hydroxide/magnesium carbonate gel in the tablets assures the same rapid and uniform reaction rate as the liquid. Thus, both medications achieve prompt and prolonged neutralization of free acid *plus* prompt relief from the pain and pressure of trapped gas.

Always in good taste

The pleasant, distinctive flavor of Silain-Gel, as well as its non-constipating feature, make it a therapy your patients can live with—in comfort and without complaint.

Select the form of Silain-Gel you want to provide symptomatic relief in:
gastric ulcer • duodenal ulcer • heartburn • gastric hyperacidity • gastritis • dyspepsia

when the patient prefers the convenience of a tablet, select
Silain-Gel® Tablets:

when the patient prefers a liquid, select
Silain-Gel® Liquid

Also available for the patient who needs an antifrothicant/antiflatulent agent only: **Silain®** (simethicone) Tablets

*Slanger, A.: Med. Times *94*:150 (Feb.) 1966.

Announcing the "Antgasid"

Silain-Gel®

Tablets: simethicone plus aluminum hydroxide/magnesium carbonate co-dried gel and magnesium hydroxide
Liquid: simethicone plus aluminum hydroxide and magnesium hydroxide

one dose does both: frees captured gas...neutralizes free acid

A·H·ROBINS A.H. Robins Company, Richmond, Virginia 23220

The actions of the official Tincture and Extract of Belladonna result chiefly from their Atropine content . . . conclude Goodman and Gilman

THE PHARMACOLOGICAL BASIS OF THERAPEUTICS
3rd Edition, page 522

ANTROCOL®

Antrocol provides the prompt, predictable antisecretory action of the belladonna alkaloid, atropine, fortified with sedation and blended with Bensulfoid, contributing to even absorption.

Each tablet or capsule contains: Atropine sulfate, 0.324 mg.; Phenobarbital, 16 mg. (may be habit forming); Bensulfoid, 65 mg. (see white section PDR). The atropine content of Antrocol is the maximum amount the average patient can take at six hour intervals over long periods with comfort.

SUPPLIED
Tablet in bottles of
100, 500 and 5000
Capsule in bottles
of 100, 500 and 1000

Caution: Federal law prohibits dispensing without prescription.

PRESCRIBING INFORMATION

Contraindicated in glaucoma. Use cautiously in prostatic hypertrophy. Side-effects of toxic dose of atropine: flushing, dryness of mouth, cycloplegia, tachycardia and urinary retention.

DOSAGE: One tablet or capsule after each meal to correct emotional stress and normalize gastric secretions. In treating peptic ulcer, doses at regular intervals up to eight (8) tablets or capsules per day to provide the proper gastric titer for healing. After ulcer has healed, one tablet or capsule after each meal to maintain a titer unfavorable to recurrence.

Clinical supply available to physicians.

WILLIAM P. POYTHRESS & CO., INC.
RICHMOND, VIRGINIA 23217
Manufacturers of Ethical Pharmaceuticals

Michigan Association For
Regional medical programs
Suite 200 / 1111 Michigan Ave. / East Lansing, Michigan 48823

Annual Report 1969-1970

A MESSAGE FROM THE PRESIDENT

The Michigan Association for Regional Medical Programs (MARMP) has just completed its third full year of operation. Potentially the most significant accomplishment during the past year was the adoption of "Program Priorities." These were designed to respond to the most pressing needs of Michigan, as a whole, as well as to our understanding of the major national health concerns.

To add to the Guidelines for Stroke, Cancer, and Educational Projects developed earlier, the year saw the completion and approval of "Heart Program Guidelines," and "Criteria for Cooperative Efforts." Approved in principle was a cooperative agreement with State and Areawide Comprehensive Health Planning Agencies. Further, a policy for the handling of small pilot, feasibility, or demonstration studies was adopted.

In addition, the Michigan Diabetes Association, the Michigan Tuberculosis and Respiratory Disease Association, the Comprehensive State Health Planning Commission and the Wolverine Medical Society were each invited to be represented on the Corporation and, thus, to participate in providing the required approval before funds can be requested of Washington. This brought the membership of the Corporation to thirty and provides additional advice from individuals representing a wide range of professional health organizations, voluntary health agencies, state government, universities, geographic areas, and the public-at-large.

Involved also have been health professionals and other volunteers who advised the Corporation through a Task Force on Continuing Education and Professional Advisory Councils in the fields of Cancer, Heart Disease, Stroke, and Chronic Respiratory Diseases. Professional Advisory Councils on Ambulatory Care and Kidney Diseases have been authorized and are in the process of formation. Volunteers also assist the Corporation in a system of peer review which is looked upon as a model by the Federal Regional Medical Programs Service.

As in previous years, the goal of the Michigan Regional Medical Programs is to assist with the development of cooperative efforts to:

1. Identify needs for improving the care of patients with cancer, heart disease, stroke, and related diseases.
2. Respond to these identified needs through the application of existing knowledge in ways acceptable to all concerned.

To those interested in cooperatively working with others to accomplish this goal, I would extend a very personal invitation to participate with us in this worthwhile endeavor to improve patient care. Additional information may be obtained from the Corporation Offices in East Lansing.

Don Marshall, M.D., President

EXISTING PROGRAM COMPONENTS

The Michigan Region supports agencies in addition to the Central (Corporation) staff for program promotion, planning, facilitating, and/or coordinating activities of concern to the Regional Medical Program (RMP). These are Michigan State University, University of Michigan (2), Wayne State University, and Zieger/Botsford Hospitals.

Michigan State University has had a planning and facilitating grant since 1967. The principal areas of concern are coordinating intra-university RMP activities; developing an extra mural program to facilitate cooperative programs outside of the academic community; and conducting limited feasibility studies to test new ideas.

1967-68 Grant	$188,564	Expenditures	$ 95,338
1968-69 Grant	243,567	Expenditures	193,175
1969-70 Grant	369,574	Expenditures	
1970-71 Grant	251,077	(thru May)	229,256

University of Michigan

The Secretariat was established to assist the University's project directors in grant administration, planning, and evaluation. It also encourages and assists the faculty in developing feasibility and demonstration studies. Funded projects include the following: Dental Planning Program, Drug Information System, Nursing Continuing Education Program, and Physician Attitude Survey. (Individually described later.)

1967-68 Grant	$146,213	Expenditures	$110,105
1968-69 Grant	135,271	Expenditures	92,756
1969-70 Grant	119,878	Expenditures	
1970-71 Grant	74,439	(thru July)	49,124

The Dental Planning Program is studying how dental care can be improved through continuing education; surveying existing dental continuing education course content in the state; and considering cooperative programs with the University of Detroit Dental School and other institutions. Activities completed or in various stages of development include a survey of dental continuing education needs; development of working relationships with the RMP financed nursing and stroke projects; the mailing of a periodic single concept bulletin to all dentists in the state; demonstrations in cancer detection, and promotion of self instructional kits in the diagnosis of early cancer.

1968-69 Grant	$ 37,012	Expenditures	$ 18,431
1969-70 Grant	55,091	Expenditures	
1970-71 Grant	47,609	(thru July)	35,825

Wayne State University has had a planning office since 1967. It is concerned with increasing the availability and accessibility of medical care to the Detroit Model Neighborhood; the evaluation of the educational needs of health professionals and auxiliary workers; and the assessment of the roles of economic, social, and racial deprivation in health services utilization. Funded projects are a Stroke Base Center; a Stroke Demonstration Unit at Detroit General Hospital; Inner-City Continuing Physician Education Program, and a Program to Survey Electronic Equipment in Special Care Unit. (Individually described later.)

1967-68 Grant	$202,846	Expenditures	$ 47,131
1968-69 Grant	162,486	Expenditures	148,927
1969-70 Grant	196,528	Expenditures	
1970-71 Grant	209,028	(thru June)	152,545

Zieger/Botsford Hospitals were selected by the Michigan Association of Osteopathic Physicians and Surgeons and the Michigan Osteopathic Hospital Association as the primary group to work with MARMP to plan principally but not exclusively for the osteopathic profession. Activities to date have included contracting with the Professional Examination Service of the American Public Health Association to develop and conduct examinations for physicians; the development of a teaching program based on identified needs; the evaluation of behavioral changes resulting from the educational programs; and the provision of assistance in the development of a neighborhood health center in Pontiac.

1968-69 Grant	$ 99,299	Expenditures	$ 76,694
1969-70 Grant	109,217	Expenditures	
1970-71 Grant	77,549	(thru June)	68,078

Central (Corporation) Staff is the arm of the Board of Directors and Regional Advisory Group (RAG) in carrying out established policy and implementing Corporation priorities and goals. It assisted with the development of the categorical and educational program guidelines, the "Program Plan," and "Program Priorities," all of which are available on request. It also provides assistance on request to both university and non-university personnel in the development of new program components. It is responsible for the implementation of the RAG program component review system, for the overall management of the grant, and for promoting cooperative efforts among health providers. Additionally, it serves as liaison between the Corporation and Federal Regional Medical Programs Service and between the Corporation and State and Areawide Comprehensive Health Planning Agencies.

1967-68 Grant	$161,781	Expenditures	$122,197
1968-69 Grant	279,235	Expenditures	178,533
1969-70 Grant	317,258	Expenditures	
1970-71 Grant	326,381	(thru August)	184,832

Heart Disease Program Components

Western Michigan Continuing Medical Education Program (Blodgett Hospital, Grand Rapids). The larger general hospitals in Grand Rapids are cooperating with each other and with ten smaller surrounding hospitals in developing and implementing a physician education program in cardiovascular diseases. The staffs of smaller hospitals are helped both to identify and meet their own needs by visiting cardiologists.

1969-70 Grant	$ 40,514	Expenditures	
1970-71 Grant	90,201	(thru June)	$ 11,805

Physician Training in Cardiovascular Care (Mercy Hospital, Benton Harbor). This program is developing a cardiovascular center at Mercy Hospital with facilities for cardiac catheterization and angiography. It is also developing and carrying out an educational program in cardiovascular diseases for the physicians in Berrien, Cass, and VanBuren counties through visiting consultants, inter-hospital conferences, and monthly clinics.

1969-70 Grant	$ 41,009	Expenditures	
1970-71 Grant	46,078	(thru July)	$ 30,182

Coronary Care Unit Training Program (Michigan Heart Association). This program continues to offer two week courses for nurses and one to three day seminars for physicians who function in coronary and intensive care units. The courses are held in various areas of the state. In addition, the project is developing "programmed learning texts" to be used with electronic teaching machines for loan to hospitals with or planning coronary care units. The program is also helping community hospitals develop their own coronary care continuing education programs.

1968-69 Grant	$ 94,277	Expenditures	$ 72,995
1969-70 Grant	214,353	Expenditures	136,998
1970-71 Grant	122,523		

Physician Education in Hypertension (Michigan State University). Over the past two years Michigan State University, in cooperation with Sparrow Hospital and Lansing physicians, has initiated a program of physician education in the management of hypertensive heart disease. A diagnostic referral center is now available. The development of self-instructional units has continued through the Michigan State University Planning and Facilitating Office since the termination of this grant on August 31, 1970.

1968-69 Grant	$ 32,190	Expenditures	$ 13,257
1969-70 Grant	70,154	Expenditures (thru May)	25,334

Survey of Electronic Equipment in Special Care Units (Wayne State University). This program surveys hospitals in the Metropolitan Detroit Area, and assesses personnel practices with respect to the electronic equipment used in coronary and intensive care units and in emergency rooms. It also determines the potential hazard in the use of such equipment and provides pertinent safety data about specific equipment to the personnel in the units surveyed.

1968-69 Grant	$ 13,601	Expenditures	$ 8,892
1969-70 Grant	63,057	Expenditures	
1970-71 Grant	55,164	(thru June)	52,973

Stroke Program Components

Regional Stroke Base Center (Wayne State University). This program is providing professional consultation to the cooperating stroke centers and the stroke public information program and assisting in the design of professional educational opportunities to meet needs. It is also responsible for the overall evaluation of the Region's stroke program.

1970-71 Grant .... $ 13,941

Cooperating Stroke Centers

Acute stroke units established at the locations below serve as demonstration and training centers for physicians and allied health personnel. Current methods of diagnosis, treatment, and rehabilitation of patients with acute stroke are being demonstrated. Additionally experts from stroke centers are making periodic visits to participating surrounding hospitals for the purpose of providing on-site assistance.

Wayne State University — Detroit General Hospital 1970-71 Grant	$148,186
Detroit Osteopathic Hospital 1970-71 Grant	$121,002
Michigan State University — Sparrow Hospital 1970-71 Grant	$ 99,570

Stroke Education Program (Michigan Heart Association). This public education program is designed to inform Michigan residents on factors and symptoms of early stroke and to motivate them to seek corrective action. It will involve television and radio announcements, magazine and newspaper articles, audiovisual materials, and other means of education.

1969-70 Grant	$ 3,013	1970-71 Grant	$ 69,459

All Three Categorical Diseases Program Components

Continuing Education in Heart Disease, Cancer, and Stroke for Nurses (University of Michigan). A continuing education program for nurses is being developed and implemented throughout the Region. Stressed are the needs of Directors of Inservice Education in the development of their own educational programs.

1967-68 Grant	$ 54,086	Expenditures	$ 35,973
1968-69 Grant	75,069	Expenditures	72,150
1969-70 Grant	156,779	Expenditures	
1970-71 Grant	148,194	(thru July)	104,019

Drug Information System (University of Michigan). The Drug Information System provides information to physicians and allied health professionals throughout the Region. Service from the base center is available twenty-four hours a day, seven days a week by dialing telephone number 313/763-0243. Service through a system of subregional centers is available on a somewhat more restricted basis. These subcenters are located at Blodgett Memorial Hospital, Grand Rapids; Hurley Hospital, Flint; Saginaw General Hospital, Saginaw; Mercy Hospital, Bay City; and St. Lawrence Hospital, Lansing. In addition, the program conducts an analysis of drug therapy patterns.

1967-68 Grant	$ 90,295	Expenditures	$ 46,195
1968-69 Grant	81,861	Expenditures	69,178
1969-70 Grant	135,617	Expenditures	
1970-71 Grant	106,968	(thru July)	100,891

Experimental Continuing Education Program for Small Inner City Hospitals (Wayne State University). This continuing education program for medical and allied health personnel is being cooperatively developed and implemented by the staff of three small inner city hospitals with the technical assistance of Wayne State University. It involves self-study, identification and assessment of factors contributing to any health care gap and the development of programs to overcome needs.

Also included is the evaluation of the effort in terms of improved patient care.

1970-71 Grant $111,734

Evaluation and Data Collection Program Components

Coordinated Data Collection and Analysis (Michigan Department of Public Health). This program is concerned with the development of methods to: (1) assist in the definition of target populations needing care; and (2) measure the performance of the health care delivery system. The methodologies include the following: study of sample populations in six different areas; coding and analysis of the contributing causes of death; and provision of technical consultation in data management and analysis to MARMP cooperating agencies and others.

1967-68 Grant .	$164,299	Expenditures . .	$131,790
1968-69 Grant .	299,059	Expenditures . .	130,573
1969-70 Grant .	407,698	Expenditures	
1970-71 Grant .	276,043	(thru May) . . .	199,709

Physician Attitude Survey (University of Michigan). The survey has been identifying the attitudes of Michigan physicians concerning their present ability to keep abreast with medical advances, their appraisal of the existing means of postgraduate medical education and their receptivity to new approaches in this area. In addition, the program is identifying physicians who occupy local key positions in the dissemination of medical information.

1968-69 Grant .	$ 93,875	Expenditures . .	$ 84,419
1969-70 Grant .	96,044	Expenditures (thru July) . . .	86,626

FEDERALLY APPROVED BUT UNFUNDED PROGRAM COMPONENTS

Comprehensive Health Care of the Urban Poor (Wayne County General Hospital, Eloise). This program, designed to serve an urban poor population, proposes to establish a modern and comprehensive screening, diagnostic, and treatment center using the facilities of the out-patient and in-patient departments of the Wayne County General Hospital. Procedures will be automated and computerized. New ways to use and train non-professional personnel will also be explored.

1969-70 Grant to plan for above project . . . . . $ 53,923
Expenditures (thru July) . . . . $ 45,021
1970-71 Approved but not funded

PROGRAM COMPONENTS APPROVED BY THE MICHIGAN REGIONAL ADVISORY GROUP AND UNDERGOING FEDERAL REVIEW

Cooperating Stroke Center (Detroit Memorial Hospital). This unit of the Michigan Regional Stroke Program will serve as a demonstration and training center for physicians and allied health personnel. Newer methods of diagnosis, treatment, and rehabilitation of patients with acute stroke will be demonstrated. Cooperative arrangements have been developed with Alexander Blain Memorial Hospital, Jennings Memorial Hospital, and the Evangelical Deaconess Hospital. These will be visited by the staff of the cooperating center for consultations, ward rounds, seminars, and demonstrations.

MEMBERS OF THE CORPORATION AND REGIONAL ADVISORY GROUP

Organizations

American Cancer Society, Michigan Division	Mrs. Clio VanValkenburg
Michigan Association of Osteopathic Physicians & Surgeons	*Dr. Dorothy E. Carnegie
Michigan Cancer Foundation . .	Dr. Michael J. Brennan
Michigan Comprehensive State Health Planning Commission	Dr. William H. Anderson (resigned)
Michigan Department of Public Health	*Dr. R. Gerald Rice
Michigan Diabetes Association . . .	Dr. John B. Bryan
Michigan Health Council	Mr. John A. Doherty
Michigan Heart Association	Dr. Donald C. Overy
Michigan Hospital Association . .	*Mr. Ronald D. Yaw
Michigan Nurses Assn.	Mrs. Esther P. Benjamin
Michigan Osteopathic Hospital Association	Dr. Allen Zieger
Michigan State Dental Assn. . .	Dr. Gerald H. Bonnette
Mich. State Medical Society	*Dr. Don Marshall
Michigan State University . . .	Dr. Andrew D. Hunt, Jr.
Michigan Tuberculosis and Respiratory Disease Association	Mrs. Anne G. Deming
University of Michigan	*Dr. John A. Gronvall
Wayne State University	*Dr. Irwin J. Schatz
Wolverine Medical Soc. . . .	*Dr. Ethelene J. Crockett

Geographical Areas

East Central Area	Mr. Milton Sacks
North Central Area	Mr. Milton D. Rasmussen
Southeast Area	Mr. William S. McNary
Southwest Area	Mr. Daniel N. Finch
Upper Peninsula Area	Dr. Walter J. Wentz
West Central Area	Dr. John C. Peirce

Public-at-Large

Mr. Lawrence Doss
Dr. Theodore Goldberg
Mr. W. Anson Hedgecock
Dr. Matthew R. Kinde
Dr. Kenneth J. Shouldice
Mr. Victor M. Zink

*Member of the Board [redacted]

MARMP wishes to acknowledge the financial support of the U.S. Department of Health, Education and Welfare. However, the views expressed herein do not necessarily represent those of the Department.

New Members

Members of the Michigan State Medical Society join in welcoming the following new members into a progressive state medical organization. MSMS is dedicated to promoting the science and art of medicine, the protection of the public health, and the betterment of the medical profession. Each new member is encouraged to join with other MSMS members at both the local and the state levels in achieving these goals.

Wm. C. Thompson, III, MD, 117 N. Washington St., Ypsilanti 48197
Ismail Ucar, MD, Pontiac State Hosp., Pontiac 48053
Rutilio Uribe, MD, St. Joseph Hospital, Detroit 48211
Mercedes A. Victoria, MD, Pontiac State Hosp., Pontiac 48053
Jose E. Yanez, MD, 1400 Chrysler Expwy., Detroit 48207
Joseph F. Baron, MD, 242 Iroquois, Laurium 49913
John C. Rowe, MD, 212 Florida St., Laurium 49913
Douglas D. Eitzman, MD, 2765 Flushing Rd., #302, Flint 48504
Jerome J. Wisneski, MD, 26 Sheldon Ave., S.E., Grand Rapids 49502
Carl B. Lauter, MD, 550 E. Canfield, Detroit 48201
Linferd G. Linabery, Jr., MD, 3808 Nottingham Terrace, Midland 48640
Richard W. Welk, MD, 5107 Barto St., Midland 48640
Joseph J. Agresta, MD, Wayne State University, Detroit 48207
Rudrick E. Boucher, MD, Wayne State University, Detroit 48207
Donald K. Crandall, MD, 4155 Nob Hill Drive, Muskegon 49441
Guillermo J. Diaz Del Castillo, MD, Wayne State University, Detroit 48207
Slobodan Djuraskovic, MD, Wayne State University, Detroit 48207
Eugene J. Keeffe, MD (Reinstatement), 880 Woodward Ave., Pontiac 48053
John S. Kostin, MD, 9880 E. Michigan Ave., Galesburg 49053
Montka Mangkornkanok, MD, Wayne State University, Detroit 48207
Rustam J. Mehdiabadi, MD, Wayne State University, Detroit 48207
Howard J. Parkhurst, MD, 315 S. Eighth, Escanaba 49829
Clinton J. Perini, MD, Wayne State University, Detroit 48207
Keo Poopat, MD, Wayne State University, Detroit 48207
Shafqat Ali, MD, 25210 Grand River Ave., Detroit 48240
Kenneth Bergsman, MD, Detroit General Hosp., Detroit 48226
Robert C. Birks, MD, VA Hospital, Allen Park 48101
Colon Campbell, MD, 2110 Women's Hospital, Ann Arbor 48104
Anibal Cazal, MD, 911 David Whitney Bldg., Detroit 48226
Richard D. Chaltry, D.O., Stephenson 49887
Douglas A. Devons, MD, Detroit General Hosp., Detroit 48226
Mehmet E. Erdem, MD, Plymouth State Home, Northville 48167
John A. Fink, MD, Univ. Medical Center, Ann Arbor 48104
Jason K. Hartjen, MD, 206 E. West St., Sturgis 49091
Jerome P. Helman, MD, 18400 Schaefer, Detroit 48235
James E. Herlocher, MD, 2355 E. Stadium Blvd., Ann Arbor 48104
Michael Kaprielian, MD (Reinstatement), 189 Townsend, Birmingham 48011
Emre Kokmen, MD, Univ. Medical Center, Ann Arbor 48104
Lawrence Krugel, MD, 19481 Livernois, Detroit 48221
Henry W. Maicki, MD, 5857 Dunmore Court, Orchard Lake 48033
John C. Mall, MD, 16000 Sheldon Rd., Northville 48167
Rodney McFarland, MD, 880 Woodward Ave., #104, Pontiac 48053
Virginia T. Pacis, MD, Pontiac State Hosp., Pontiac 48053
Alexander J. Petrides, MD, 28200 W. Seven Mile Rd., Livonia 48152
Conrad L. Pickett, MD, Ypsilanti State Hosp., Ypsilanti 48197
Primitivo P. Rivera, MD, 41001 W. Seven Mile Rd., Northville 48167
Harvey Rosen, MD, 1151 Taylor, Detroit 48202
Melvyn Rubenfire, MD, 6767 W. Outer Drive, Detroit 48235
Malcolm D. Steider, MD, 159 E. Chicago, Coldwater 49036
Colin T. Sutherland, MD, 39000 Mound Rd., Sterling Heights 48659

The treatment of

impotence

due to androgenic deficiency in the American male.
The concept of chemotherapy plus the
physician's psychological support is confirmed
as effective therapy.

NEW CLINICAL STUDY

The Treatment of Impotence
with Methyltestosterone Thyroid
(100 patients — Double Blind Study)
T. Jakobovits
Fertility and Sterility, January 1970
Official Journal of the
American Fertility Society

Android®

(thyroid-androgen) tablets

Double-Blind Study and Type of Patient: 100 patients suffering from impotence. Of the patients receiving the active medication (Android) a favourable response was seen in 78%. This compares with 40% on placebo. Although psychotherapy is indicated in patients suffering from functional impotence the concomitant role of chemotherapy (Android) cannot be disputed.

Choice of 4 strengths:

Android

Each yellow tablet contains:
Methyl Testosterone ..2.5 mg.
Thyroid Ext. (1/6 gr.) ..10 mg.
Glutamic Acid ....50 mg.
Thiamine HCL ....10 mg.
Dose: 1 tablet 3 times daily
Available:
Bottles of 100, 500, 1000

REFER TO PDR

Android-HP

HIGH POTENCY

Each red tablet contains:
Methyl Testosterone ..5.0 mg.
Thyroid Ext. (½ gr.) ...30 mg.
Glutamic Acid ....50 mg.
Thiamine HCL ....10 mg.
Dose: 1 tablet 3 times daily.
Available:
Bottles of 100, 500, 1000.

Android-X

EXTRA HIGH POTENCY

Each orange tablet contains:
Methyl Testosterone .12.5 mg.
Thyroid Ext. (1 gr.) ....64 mg.
Glutamic Acid ....50 mg.
Thiamine HCL ....10 mg.
Dose: 1 or 2 tablets daily.
Available:
Bottles of 60, 500.

Android-Plus

WITH HIGH POTENCY B-COMPLEX AND VITAMIN C

Each white tablet contains:
Methyl Testosterone ..2.5 mg.
Thyroid Ext. (¼ gr.) ...15 mg.
Ascorbic Acid (Vit. C) .250 mg.
Thiamine HCL ....25 mg.
Glutamic Acid ....100 mg.
Pyridoxine HCL ....5 mg.
Niacinamide ....75 mg.
Calcium Pantothenate .10 mg.
Vitamin B-12 ....2.5 mcg.
Riboflavin ....5 mg.
Dose: 2 tablets daily.
Available: Bottles of 60, 500.

Contraindications: Android is contraindicated in patients with prostatic carcinoma, severe cardiorenal disease and severe persistent hypercalcemia, coronary heart disease and hyperthyroidism. Occasional cases of jaundice with plugging biliary canaliculi have occurred with average doses of Methyl Testosterone Thyroid is not to be used in heart disease and hypertension

Warnings: Large dosages may cause anorexia, nausea, vomiting abdominal pain, diarrhea, headache, dizziness, lethargy, paresthesia, skin eruptions, loss of libido in males, dysuria, edema, congestive heart failure and mammary carcinoma in males

Precautions: If hypothyroidism is accompanied by adrenal insufficiency the latter must be corrected prior to and during thyroid administration

Adverse Reactions: Since Androgens, in general, tend to promote retention of sodium and water, patients receiving Methyl Testosterone, in particular elderly patients, should be observed for edema

Hypercalcemia may occur, particularly in immobilized patients· use of Testosterone should be discontinued as soon as hypercalcemia is detected

References: 1. **Montesano, P., and Evangelista, I.** Methyltestosterone-thyroid treatment of sexua impotence Clin Med 12·69, 1966 2. **Dublin, M. F.** Treatment of impotence with methyltestosterone thyroid compound. West Med 5·67, 1964 3. **Titeff, A. S.** Methyltestosterone-thyroid in treating impotence Gen Prac 25:6, 1962 4. **Hellman, L., Bradlow, H. L., Zumoff, B., Fukushima, D. K., and Gallagher, T. F** Thyroid-androgen interrelations and the hypocholesteremic effect of androsterone. J Clin Endocr 19:936 1959. 5. **Farris, E. J., and Colton, S. W.** Effects of L-thyroxine and liothyronine on spermatogenesis J Urol 79·863, 1958. 6. **Osol, A., and Farrar, G. E.** United States Dispensatory (ed. 25). Lippincott, Philadelphia, 1955, p. 1432. 7. **Wershub, L. P.** Sexual Impotence in the Male. Thomas, Springfield, Ill., 1959, pp. 79-99.

Write for literature and samples: BROWN **THE BROWN PHARMACEUTICAL CO., INC.** 2500 West 6th Street, Los Angeles, California 90057

27th ANNUAL
MIDWEST CLINICAL CONFERENCE

Wednesday, March 3 through Saturday, March 6, 1971

in Chicago's All New
McCORMICK PLACE

- General Clinical Sessions
- Clinical Motion Pictures
- Trauma Program
- Specialty Society Workshops
- Socio-Economic Topics
- Technical and Scientific Exhibits

Continuing Education for All Physicians in Every Specialty

For Preliminary Program Write:

CHICAGO MEDICAL SOCIETY
310 South Michigan Avenue
Chicago, Illinois 60604

Medical care programs

Letter from Doctor Rice

It is almost certain that sweeping and revolutionary legislative proposals will be introduced in the U. S. Congress and the Michigan Legislature affecting your profession. National Health Insurance, group practice, health maintenance organizations, peer and utilization review, physicians' fees, Medicare and Medicaid, and comprehensive health planning are just a few subjects of concern to you, the physician, and MSMS.

The MSMS Committee on Governmental Medical Care Programs commenced publishing special articles in September, 1969 to provide the latest, most accurate information on proposed and enacted government medical legislation and regulations. The committee has received many favorable comments and will continue these articles.

Organized medicine depends on each individual member to be knowledgeable and actively involved at the county, regional and state professional and community levels. The physician's individual involvement can be vital as an effective means of informing legislators, the public and his patients about the unique and complex problems confronting the physician in his efforts to provide high-quality medical care and attention. His story must be told—and heard.

A comprehensive review of these several programs and proposals is not possible because of limited printing space. A detailed analysis is available by writing MSMS.

Robert E. Rice, M.D., Chairman
MSMS Committee on Governmental
Medical Care Programs

Here are the facts about health care assistance programs

The following two items are the first in a new series in MICHIGAN MEDICINE explaining the several health care assistance programs to the physician, enabling him to provide accurate information if his patient requests assistance.

It is suggested that physicians and their medical assistants become knowledgeable about these programs and retain these articles as reference material.

United States Public Health Service

Services Available: United States Public Health Service facilities and Contract Physicians provide medical, surgical, and dental services, on both an inpatient and outpatient basis to certain beneficiaries, some of which are listed below.

Eligibility: American seamen are eligible at Public Health Service Hospitals, Outpatient Clinics, Contract Physicians' offices, and in emergency, civilian or non-Service facilities. The term "seaman" includes any person, including trainees, employed on board in the care, preservation or navigation of a vessel which is registered, enrolled and licensed under the U. S. Maritime Law. This does not include the owners of such vessels, except the owner-operator of a commercial fishing vessel.

In general, active duty and retired members (officers and enlisted personnel) of the U. S. Public Health Service Commissioned Corps, U. S. Coast Guard, National Oceanic and Atmospheric Administration (formerly Coast & Geodetic Survey/Environmental Science Services Administration), U. S. Army, U. S. Navy, U. S. Marine Corps and U. S. Air Force are eligible for care at U. S. Public Health Service facilities. Dependents of active or retired members of these services also are eligible for care on a space-available basis.

The Bureau of Employees' Compensation of the Department of Labor may refer patients for examination or treatment to U. S. P. H. S. facilities.

Other Government agencies may request the U. S. Public Health Service to provide examination services for their applicants and employees, (e.g., Peace Corps, Department of State, etc.).

Any person requiring vaccination for Yellow Fever for travel in or through an area where it is endemic may be immunized, provided the facility has been designated by the Foreign Quarantine Program of the U. S. Public Health Service as a center to give the inoculations. Other immunizations may be given without charge to Uniformed Service members and their dependents, U. S. Government employees, their dependents and other persons traveling for the Government on official travel orders.

Any person afflicted with Hansen's disease (Leprosy) may be treated at the U. S. Public Health Service Hospital, Carville, Louisiana. Referral may be made by any physician.

For information on the treatment of addicts under the Narcotic Addict Rehabilitation Act contact the

Director, National Institute of Mental Health, 5454 Wisconsin Avenue, Chevy Chase, Maryland 20015.

Application: A document of eligibility, such as listed below, must be presented to the admitting office of a U. S. Public Health Service facility, or to the contract physician. (Facilities may be found under the listing "U. S. Government" in the local telephone book.)

1. Seamen: A properly executed Master's Certificate of Service (Form PHS-125) or evidence (payroll slips, discharge books, etc.) of 60 days of sailing time, part of which must have been within the 90 days preceding application for care. Length of service requirements may be modified during periods of poor shipping conditions.
2. Uniformed Service personnel and their dependents: A valid ID card.
3. Bureau of Employees' Compensation beneficiary: CA-16 signed by the supervisor.
4. Other Government agency: A letter of request from the referring agency, e.g., Peace Corps, State Department.

Additional Information may be requested from the local U. S. Public Health Service facility or from the Director, Federal Health Programs Service, Health Services and Mental Health Administration, Department of Health, Education, and Welfare, 5600 Fishers Lane, Rockville, Maryland 20852.

Services Available Through Department of Education Division of Vocational Rehabilitation

Under the Michigan Division of Vocational Rehabilitation, rehabilitation services are available to every individual who has a physical or mental handicap or behavioral disorder which interferes with his obtaining or holding a suitable job and who has a reasonable chance of securing employment after services have been completed.

Types of Services Available: Once an individual's potential employability has been determined, essentially any service that contributes to achieving his employment objective is offered including:

1) Comprehensive evaluation, both psychological and medical
2) Medical, surgical, and hospital care and related therapy to remove or reduce disability
3) Prosthetic devices
4) Counseling and guidance for vocational adjustment
5) Training
6) Evaluation and/or adjustment services in comprehensive or specialized rehabilitation facilities
7) Maintenance and transportation
8) Tools, equipment, and licenses needed for work or in establishing a small business
9) Job placement and follow-up

Under the evaluation phase of the rehabilitation process, pertinent medical and psychological data are gathered by the collection of background information and appropriate examinations.

Following determination of eligibility and the provision of restorative services, if necessary, the client is provided with counseling and guidance toward a suitable vocational objective. During this phase, the individual may be provided with training in any of the following areas:

1) Personal adjustment training
2) Pre-vocational training
3) Work Adjustment training
4) Training in the use of artificial limbs, hearing aids, or other appliances
5) Remedial training
6) Literacy training
7) Vocational training
8) Academic training
9) Speech and hearing training
10) Mobility training; and any other kind of organized training needed to meet the particular needs of the handicapped individual.

This training may be provided at trade schools, colleges or universities, workshops or rehabilitation facilities, by tutor or correspondence, apprenticeship, or in an organized on-the-job training situation with an employer.

At the completion of training and/or restoration services, job placement efforts are initiated in the client's behalf. These efforts include counseling the client around employment interviewing techniques, job development and employer contacts by the DVR coordinator and obtaining the placement assistance of other public and private employment agencies.

Follow-up counseling is continued with the client after he is placed on the job and until both he and the coordinator consider his work adjustment suitable and satisfactory.

Application for vocational rehabilitation services can be made at any one of the more than thirty Michigan Division of Vocational Rehabilitation offices located throughout the state.

Fast...long-lasting
relief of aches
and pains
of colds and flu

with the unique timed-release aspirin

Double strength Measurin timed-release aspirin offers a new kind of control for your patients with cold and flu discomforts. In each 10-grain tablet are over 6,000 microscopic reservoirs that release aspirin at a controlled rate—some right away and some later on. This means fast relief of symptoms, followed by hours of comfort. Throughout the day, Measurin gives your patients freedom from a 4-hour aspirin schedule. During the night, its 8-hour dosage schedule holds the promise of sound sleep without awakening to take extra tablets.

For Professional Samples write:
Breon Laboratories Inc.
Sample Fulfillment Division
P.O. Box 141
Fairview, N.J. 07022

BREON **BREON LABORATORIES INC.**
90 Park Avenue, New York, N.Y. 10016
Subsidiary of Sterling Drug Inc.

MEASURIN®
TIMED-RELEASE ASPIRIN

ECONOMICAL • EFFECTIVE • LONG LASTING PAIN RELIEF

Dosage: 2 tablets followed by 1 or 2 tablets every 8 hours as required, not to exceed 6 tablets in 24 hours. For maximum nighttime pain relief, 2 tablets at bedtime.

Available: Bottles of 12, 36 and 60 tablets

Revision Made in MD-Lawyer Statement

Paragraph 1 of the section, "Compensation for Services of Physicians" of the Statement of Principles for Lawyers and Physicians *has been revised and adopted by the State Bar of Michigan and MSMS.*

Formerly, the attorney was only required to advise his client of the physician's assistance and services and to cooperate with the physician to see that the physician received a reasonable fee. The new revision requires that the attorney is responsible for paying the physician a reasonable fee for services rendered.

Additional copies are available by writing MSMS Headquarters.

Preamble

In recognition of the public service obligations common to the medical and legal professions, and in the belief that such action will promote a closer cooperation and assist in maintaining a harmonious and compatible relationship between the two professions, thus serving the public interest, the Michiagn State Medical Society and the State Bar of Michigan do hereby adopt the following Statement of Principles governing physicians and lawyers.

Medical Reports Requested by Attorneys

1. Where a report is requested by the patient's attorney, upon authorization from the patient, the physician should furnish to the attorney such report with reasonable promptness.

2. The contents of such report should be such as to permit the attorney to protect the interests of the patient fully and properly and compatibly with the attorney-client relationship.

3. When requesting such report, the attorney should clearly specify the information desired, and make known to the physician whether or not it is to embody opinions regarding diagnosis, prognosis and disability evaluation.

4. The attorney should recognize that it is not always possible for the physician to prepare a medical report on short notice. Where the physician may indicate that he deems it necessary or advisable before submitting such report to have the opportunity of seeing and examining the patient, the attorney should cooperate with the

Noludar® 300
(methyprylon)
one capsule
for the rest
of the night

Before prescribing, please consult complete product information, a summary of which follows:
INDICATION: Relief of insomnia of varied etiology.
CONTRAINDICATIONS: Patients with known hypersensitivity to the drug.
WARNINGS: Caution patients about combined effects with alcohol and other CNS depressants. Caution against hazardous occupations requiring complete mental alertness, such as operating machinery or driving a motor vehicle shortly after ingesting the drug.
Physical and Psychological Dependence: Physical and psychological dependence rarely reported. If withdrawal symptoms do occur they may resemble those associated with withdrawal of barbiturates and should be treated in the same fashion. Use caution in administering to individuals known to be addiction-prone or those whose history suggests they may increase the dosage on their own initiative. Repeat prescriptions should be under adequate medical supervision.
Usage in Pregnancy: Weigh potential benefits in pregnancy, during lactation, or in women of childbearing age against possible hazards to mother and child.
PRECAUTIONS: If sleeplessness is pain-related, an analgesic should also be prescribed. Perform periodic blood counts if used repeatedly or over prolonged periods. Total daily intake should not exceed 400 mg, as greater amounts do not significantly increase hypnotic benefits.
ADVERSE REACTIONS: At recommended dosages, there have been rare occurrences of morning drowsiness, dizziness, mild to moderate gastric upset (including diarrhea, esophagitis, nausea and vomiting), headache, paradoxical excitation and skin rash. There have been a very few isolated reports of neutropenia and thrombocytopenia; however, the evidence does not establish that these reactions are related to the drug.

ROCHE Roche
LABORATORIES
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

physician by arranging for his client to be seen by the physician.

5. When a medical report is requested by an attorney, he should not take the time of the physician for a conference unless:

(a) It appears to the attorney that a conference is necessary for a proper report or

(b) The physician requests such a conference before furnishing his report.

6. After the physician has furnished a report, if either the physician or the attorney feels it necessary or desirable to hold a conference with reference to the contents of the report, the attorney should be cognizant of the demands of time made upon the physician, and should cooperate to arrange such conference at a time and place indicated by the physician to be most convenient and suitable.

Cooperation Between Physician and Attorney

1. It is the duty of the attorney to furnish to the physician reasonable advance notice that the case is approaching trial, and that the physician is expected to be called as a witness in the trial of the case.

2. It is the duty of the attorney to make inquiry and ascertain from the physician as to any hospital records in appropriate cases, or other records not under the direct control or possession of the physician, including X-rays or reports the physician desires to have available at the time of his being a witness in the trial of the case, and to make the necessary arrangements so that such reports are thus available for the use of the physician at such time.

3. It is the duty of the attorney to request and remind the physician to bring with him at the time he appears as a witness his own office records with reference to his patient.

4. It is the duty of the attorney, after the physician requests the opportunity of seeing and examining the patient before trial, to arrange for the patient to be seen by the physician.

5. It is the duty of the physician at this time to review his own office records and any other records pertaining to his patient so as to cooperate with the attorney in the preparation of the trial of the case.

6. While the physician heretofore may have furnished a medical report to the attorney, the physician should recognize that such prior report likely was furnished for the principal purpose of permitting the attorney properly to plead his client's medical claims in the case. The physician

(Continued on Page 65)

Established 1924

MERCYWOOD HOSPITAL

4038 Jackson Road **Conducted by Sisters of Mercy** **Ann Arbor, Michigan**

Telephone — 313 663-8571

Mercywood MERCY

Mercywood Hospital is a private neuropsychiatric hospital licensed by the Michigan Department of Mental Health. Mercywood specializes in intensive, multi-disciplinary treatment for emotional and mental disorders.

Accredited by the Joint Commission on Accreditation of Hospitals and the National League of Nursing. A full Blue Cross participating hospital.

Certified for: Medicare and M.A.A. programs

PSYCHIATRIC STAFF

Lyle M. Allis, M.D.
Robert J. Bahra, M.D.
Dean P. Carron, M.D.
Francis M. Daignault, M.D.
Gordon C. Dieterich, M.D.
James R. Driver, M.D.
Robert L. Fransway, M.D.
Stuart M. Gould, Jr., M.D.
Leonard E. Himler, M.D.*
Sydney Joseph, M.D.
Hubert Miller, M.D.
Jacob J. Miller, M.D.
Rudolf Nobel, M.D.
Gerard M. Schmit, M.D.
Richard D. Watkins, M.D.

*1904-1967

Michigan Mediscene

Jan. 13-15—Postgraduate program on Decision Making in Acute Coronary Care, Towsley Center, The U-M, Ann Arbor, sponsored by The U-M and Michigan Heart Association, contact: Oliver H. Wendt, Michigan Heart Association, 13100 Puritan, Detroit, 48227.

Jan. 26—Board Meeting, Woman's Auxiliary to MSMS, MSMS Headquarters, East Lansing, 9:30 a.m. to 1 p.m., contact: Mrs. F. P. Rhoades, 272 Ashland Ave., Detroit, 48215

Jan. 27—MSMS Council, MSMS Headquarters, East Lansing, 9:30 a.m., contact: Warren F. Tryloff, MSMS director

Jan. 22-24—Michigan Allergy Society Family Winter Weekend, Shanty Creek Lodge, contact: Rudolph E. Wilhelm, MD, Michigan Allergy Society, 751 S. Military Road, Dearborn, 48124.

Jan. 28—Population Control Workshop, MSMS Headquarters, all day, contact: Miss Helen Schulte, MSMS Headquarters

Jan. 30-31—Annual Winter Educational Seminar, Michigan State Medical Assistants Society, the Ramada Inn, Saginaw, contact: Mrs. Elaine Roekle, 1227 N. Michigan, Saginaw, 48602

Jan. 31—Michigan Academy of General Practice, all-day meeting on drug abuse, Kellogg Center, East Lansing, 9 a.m., contact: Edwin Lynn, M.D., Department of Psychiatry, Michigan State University, East Lansing 48823

SIXTEENTH ANNUAL

MEDICLINICS

POSTGRADUATE MEDICAL
REFRESHER COURSE

March 8-18, 1971

FORT LAUDERDALE, FLORIDA

Headquarters:
Galt Ocean Mile Hotel

Sponsored by Florida Academy of General Practice and the Broward General Hospital. Accepted for 32 hours of credit by the American Academy of General Practice.

Registration information:

MEDICLINICS
832 Central Medical Building
Saint Paul, Minnesota 55104
Registration Fee: $100.00

Pre-Registration Hotel Room Guaranteed

Feb. 5-7—Michigan Physical Therapists meeting on communications, Kellogg Center, East Lansing, contact: George Andrews, R.P.T., Wayne State University, 645 Mullett, Detroit, 48226

Feb. 7-12—15th Annual Midwinter Medical Conference, a general medical and surgical meeting for physicians in Michigan, Wisconsin, Ohio and Illinois, contact: Joel Clay, M.D., 263 S. Gratiot Ave., Mt. Clemens, 48043

March 10—MSMS Council, MSMS Headquarters, East Lansing, 9:30 a.m., contact: Warren F. Tryloff, MSMS director

March 23—Legislative Workshop, Woman's Auxiliary to MSMS, Olds Plaza Hotel, Lansing, 8:30 a.m.-all day, contact. Mrs. Eli Igna, 584 Lakeland, Grosse Pointe, 48230

April 14-15—10th Annual MSMS Conference on Maternal and Perinatal Welfare, Olds Plaza Hotel, Lansing, contact: Miss Helen Schulte, MSMS Headquarters

April 19-21—Clinical Pharmacology with Emphasis on Newer Drugs, American College of Physicians, University of Michigan Medical School, Ann Arbor, contact: Edward A. Carr, M.D., director

April 21—MSMS Council, MSMS Headquarters, East Lansing, 9:30 a.m., contact: Warren F. Tryloff, MSMS director

April 22—Sixth Annual MSMS Conference on Medical Aspects of High School Sports, Kellogg Center, MSU, East Lansing, 9 a.m., contact: James Feurig, M.D., Olin Health Center, MSU, East Lansing, 48823

April 27-28—Spring Mental Health meeting, sponsored by Michigan Society for Mental Health, and MSU College of Human Medicine, Department of Psychiatry and Continuing Education Service, contact: Harold Drain, Ph.D., Department of Psychiatry, MSU

April 28-29—Spring Conference of the Woman's Auxiliary to MSMS, Sheraton Motor Inn, Pontiac, contact: Mrs. F. P. Rhoades, 272 Ashland Ave., Detroit, 48215

April 29-May 1—Annual Scientific Sessions and Heart Days, Michigan Heart Association, Cobo Hall and the Pontchartrain Hotel, Detroit, contact: David Ballinger, MHA director of Field Services, 13100 Puritan, Detroit, 48227

April 30-May 2—Annual meeting, Michigan State Medical Assistants Society, Weber's Motor Inn, Ann Arbor

May 21-23—Michigan Kidney Foundation annual and educational meeting, Kellogg Center, East Lansing, contact: Martin Jones, M.D., 2909 E. Grand River, Lansing

May 22-23—Michigan Society of Medical Technologists, annual and educational meeting, Kellogg Center, East Lansing, contact: Robert Brooks, School of Medical Technology, MSU, East Lansing, 48823

May 24-28—Clinical Endocrinology: Physiological Basis for Current Diagnostic and Therapeutic Procedures, American College of Physicians, U-M Medical Center, Ann Arbor, contact: Jerome W. Conn, M.D., course director

May 26—MSMS Council, MSMS Headquarters, East Lansing, 9:30 a.m., contact: Warren F. Tryloff, MSMS director

June 16—MSMS Council, MSMS Headquarters, East Lansing, noon to five, contact: Warren F. Tryloff, MSMS director

June 20-24—AMA Annual Convention, Atlantic City

July 22-24—Annual Midsummer Meeting of The MSMS Council, place to be selected, contact: Warren F. Tryloff, MSMS director

Oct. 3 and 6—The Council, Pantlind Hotel, Grand Rapids

Nov. 10—MSMS Council, MSMS Headquarters, East Lansing, noon to 5 p.m., contact: Warren F. Tryloff, MSMS director

Nov. 28-Dec. 1—AMA Clinical Convention, New Orleans

Dec. 8—MSMS Council, MSMS Headquarters, East Lansing, 9:30 a.m., contact: Warren F. Tryloff, MSMS director

A once-popular treatment for back pains was to have the seventh son of a seventh son stand or walk on the patient's back.

The pain of earache was allegedly relieved by holding a hot roasted onion to the ear.

For headache, a sovereign remedy was to wear a snakeskin round one's head.

A realistic approach to pain relief

Empirin'®

Compound with Codeine Phosphate gr. 1/2 No. 3

Each tablet contains:
Codeine Phosphate gr. 1/2 (Warning—May be habit forming), Phenacetin gr. 2 1/2, Aspirin gr. 3 1/2, Caffeine gr. 1/2.

keeps the promise of pain relief

'B.W. & Co.' narcotic products are Class "B", and as such are available on oral prescription, where State law permits.

BURROUGHS WELLCOME & CO. (U.S.A.) INC.
Tuckahoe, N.Y.

Now that there's a greater therapeutic potential for treating Parkinson's disease and syndrome

...the information on these pages will be of practical interest to you

Larodopa® (levodopa) Roche : therapy that demands slow, individualized dosage titration

With the advent of new Larodopa (levodopa), there is now an agent that holds promise of relief of all the major symptoms of Parkinson's disease and syndrome—rigidity and akinesia as well as tremor.

However, as has been reported in the medical literature, levodopa demands slow, careful titration of dosage, and frequent patient monitoring. Adverse reactions may occur at any time, some serious enough to require dosage reduction or discontinuance of therapy. Thus, before prescribing, it is particularly important to refer to the following Important Therapeutic Considerations, the sections covering dosage and administration, and to the information on monitoring the patient (see prescribing information).

Important Therapeutic Considerations

Larodopa (levodopa) is an unusual drug which must be administered with particular care. In view of its high incidence of adverse reactions, you will find the following therapeutic considerations for Larodopa important:

(a) Larodopa is not curative and its mechanism of action is unknown, though postulated.

(b) Long-term safety and efficacy for Larodopa have not been established.

(c) Accurate diagnosis is imperative since there is no evidence that Larodopa is effective in neurological diseases other than Parkinson's disease and syndrome.

(d) About one-third of patients or more will not experience clinical improvement on Larodopa, and virtually 100% of patients will experience side effects of some degree.

(e) The dose of Larodopa producing maximal improvement with tolerated side effects must be *carefully titrated for the individual patient.*

(f) Finally, there is no evidence that early treatment with Larodopa, while possibly controlling symptomatology, alters the course of the disease.

Photographs of patients treated with Larodopa by permission of the patients.

Guide to dosage and administration of Larodopa® (levodopa) Roche

Usual daily dosage—initially, 0.5 to 1 Gm daily (divided i 2 or more doses with food).

Total daily dosage—increased gradually in increments of 0.125 to 0.75 Gm every 2 or 3 days, as tolerated.

Usual daily dose range—from 4 to 6 Gm given orally in 3 or more divided doses, with food.

Daily dosage should NOT exceed 8 Gm.

Optimal therapeutic dosage—usually reached in 6 to 8 weeks.

Establishing optimal dosage—must be determined and *carefully titrated for the individual*—gradually increase dosage until: (1) maximal response is seen, or (2) maximum recommended dosage is reached, or (3) side effects preclude further dosage increase, or require reduction or discontinuation of dosage.

Interrupted therapy—after brief interruption, dosage should again be adjusted gradually. (In many cases, the patient can be rapidly titrated to his previous therapeutic dosage. See "Precautions" section of Complete Prescribing Information.)

To underscore the extreme importance of careful dosage titration, the following week-by-week dosage pattern has been prepared, based on the assumption that the course of therapy is uninterrupted by any complications requiring a change in dosage. (Again, dosage must be reduced when intolerable side effects occur.)

Because it is absolutely imperative that Larodopa therapy be individualized to meet the particular needs of each patient, the following dosage schedule should be considered only a model.

Larodopa®
levodopa/Roche

Titration of Larodopa (levodopa) dosage n patient evaluated weekly

ntervals	0.25 Gm Tablets	0.5 Gm Tablets	Total Daily Dose
Week 1	½ tab (0.125 Gm) *q.i.d.* w/ food		0.5 Gm
Week 2	1 tab (0.25 Gm) *q.i.d.* w/ food		1.0 Gm
Week 3	1½ tab (0.375 Gm) *q.i.d.* w/ food		1.5 Gm
Week 4		1 tab (0.5 Gm) *q.i.d.* w/ food	2.0 Gm
Week 5		1½ tab (0.750 Gm) at breakfast and dinner. 1 tab (0.5 Gm) at lunch and bedtime	2.5 Gm
Week 6		1½ tab (0.750 Gm) *q.i.d.* w/ food	3.0 Gm
Week 7		2 tab (1.0 Gm) at breakfast and dinner. 1½ tab (0.750 Gm) at lunch and bedtime	3.5 Gm
Week 8		2 tab (1.0 Gm) *q.i.d.* w/ food	4.0 Gm

The daily maintenance dosage in the above example may be increased, decreased, or maintained at the 4 Gm level depending upon the point at which optimal therapeutic esults are achieved.

Concurrent therapies: Larodopa (levodopa) may be used concomitantly with other antiparkinsonism drugs such as benztropine mesylate (Cogentin), trihexyphenidyl HCl (Artane) or procyclidine HCl (Kemadrin), but when more han one drug is used, the usual dose of each may have to be reduced.

Not to be given concomitantly: MAO inhibitors. Such agents must be discontinued two weeks prior to initiating Larodopa therapy.

Note of caution for patients who require vitamin supplementation: It has been reported that pyridoxine HCl (vitamin B_6) can rapidly reverse the antiparkinson effects of levodopa therapy.

A timetable for monitoring

While it cannot be emphasized too strongly that each patient on Larodopa must be treated as a totally *distinct* entity, the following are suggested as guidelines in the monitoring of such patients.

1. *For the first month, at least:* the average ambulatory outpatient should be seen and evaluated a minimum of *once a week.*
2. *During the second month:* patient evaluations can be extended to *every two weeks* (assuming no laboratory abnormalities or intolerable side effects have occurred).
3. *From the third through the sixth month:* the patient should be evaluated *once a month.*
4. *After six months on the appropriate maintenance dose:* with no significant adverse reactions or laboratory abnormalities, the patient should be seen at least *once every two months.*
5. *Finally, after one year on maintenance dosage:* evaluation should be made no less than *once every three months.*

Therapeutic response

A favorable response may often be seen within 10 days to several weeks. However, a patient should not be taken off a tolerable dose—even in the absence of a response—until six months have elapsed. This is because, in some instances, the response may come relatively late. Of course, any serious laboratory abnormalities or intolerable side effects automatically dictate discontinuance of therapy.

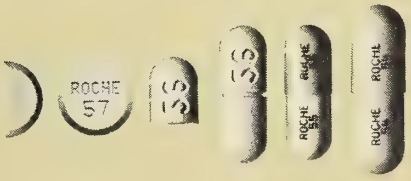
Lessening the side-effects problem

While it is generally advisable that levodopa be taken after meals, nausea and vomiting, two frequently occurring side effects of levodopa, can often be minimized by taking medication with foods. If nausea becomes intolerable, the dosage should be cut back in daily decrements equal to the most recent increments given the patient. This reduction is to be spaced over two- or three-day intervals. Conversely, as nausea subsides, the drug dosage should be slowly increased in like increments.

An important part of the routine monitoring procedure would be to determine any possible cardiovascular problems. If cardiac arrhythmias occur, Larodopa should be discontinued and other antiparkinson therapy instituted. With orthostatic hypotension a possibility, checking the patient's blood pressure (both supine and standing) is essential.

If choreiform movements appear, they usually occur when maximum therapeutic dosages are reached. To control such effects, reduce dosage by decrements of 0.5 Gm daily.

Flexible dosage: scored tablets of 0.25 Gm and 0.5 Gm help simplify dosage titration



Conveniently scored 0.25 and 0.5 Gm tablets make possible more precise titration. Should another dosage form be preferred, Larodopa is also supplied in capsule strengths of 0.25 and 0.5 Gm.

Before prescribing, please consult product information on next page. →

For the relief of symptoms associated with Parkinson's disease and syndrome

Larodopa®
levodopa/Roche

Before prescribing, please consult complete product information, a summary of which follows:

BECAUSE OF THE HIGH INCIDENCE OF ADVERSE REACTIONS AND THE NECESSITY FOR INDIVIDUALIZING THERAPY, THE PHYSICIAN SHOULD THOROUGHLY FAMILIARIZE HIMSELF WITH THE INFORMATION IN THE PACKAGE INSERT BEFORE INSTITUTING THERAPY WITH LARODOPA (LEVODOPA). ACCURATE DIAGNOSIS IS IMPERATIVE BECAUSE EVIDENCE IS LACKING THAT LARODOPA IS EFFECTIVE IN NEUROLOGICAL DISEASES OTHER THAN PARKINSON'S DISEASE AND SYNDROME.

ADEQUATE CLINICAL AND LABORATORY FACILITIES SHOULD BE AVAILABLE FOR PROPER MONITORING OF TREATMENT.

THE LONG-TERM SAFETY AND EFFICACY OF LARODOPA HAVE NOT BEEN ESTABLISHED.

Indications: For the treatment of Parkinson's disease and syndrome. Useful in relieving many of the symptoms, particularly rigidity and bradykinesia; frequently helpful in management of associated tremor, dysphagia, sialorrhea and postural instability.

Contraindications: In patients for whom a sympathomimetic amine is contraindicated; in patients receiving MAO inhibitors (the latter should be discontinued two weeks prior to initiating therapy with Larodopa); in patients with clinical or laboratory evidence of uncompensated endocrine, renal, hepatic, cardiovascular or pulmonary disease; with narrow angle glaucoma and blood dyscrasias; in patients with known hypersensitivity to levodopa.

Warnings: Long-term safety and efficacy not established. Administer with extreme caution to patients with bronchial asthma or emphysema who may require sympathomimetic drugs; to those with active peptic ulcer (in facilities equipped to treat gastrointestinal hemorrhage); in patients with psychoses or severe psychoneuroses. Initiate therapy with extreme caution and in proper treatment facility in patients with a history of myocardial infarction who have residual atrial, nodal or ventricular arrhythmias. Monitor all patients for development of mental changes, depression with suicidal tendencies, other serious antisocial behavior. Carefully consider concomitant administration of pyridoxine hydrochloride (vitamin B_6); oral doses of 10 to 25 mg have been reported to rapidly reverse the antiparkinson effects of Larodopa. In pregnancy, weigh potential benefits against possible hazards. Do not use in nursing mothers. Safety of Larodopa in children under age 12 not established.

ROCHE 57
ROCHE
ROCHE
ROCHE
ROCHE
ROCHE

Precautions: During extended therapy, periodic evaluations of hepatic, hematopoietic, cardiovascular and renal function recommended. In diabetic patients, control may be adversely affected; careful, frequent monitoring and proper adjustment of antidiabetic regimen required. Patients with chronic wide angle glaucoma may be treated cautiously provided intraocular pressure is well controlled and patient is monitored carefully. Monitor carefully patients receiving antihypertensive agents or psychoactive drugs concomitantly, or those with history of convulsions. If general anesthesia is required, discontinue Larodopa 24 hours prior to surgery; monitor cardiorespiratory functions carefully. Patients who improve on Larodopa therapy should resume normal activities cautiously. May be used concomitantly with other antiparkinson drugs with possible reduction in dosage of each.

Adverse Reactions: *Most frequently occurring:* nausea, anorexia, emesis, cardiac irregularities, orthostatic hypotension; choreiform, dystonic and other adventitious movements; dizziness, sedation, dyskinesia; psychiatric symptoms such as agitation, anxiety, confusion, depression, hallucinations, delusions, insomnia, nightmares, and mental changes including paranoid ideation and psychotic episodes. *Less frequently occurring* and listed according to system: *psychiatric*—suicidal tendencies, increased libido with serious antisocial behavior, euphoria, lethargy, stimulation, fatigue and malaise, dementia; *neurological*—ataxia, convulsions, faintness, impairment of gait, headache, increased hand tremor, akinetic episodes, torticollis, trismus, oculogyric crisis, weakness, numbness, bruxism; *gastrointestinal*—constipation, diarrhea, epigastric and abdominal distress and pain, flatulence, eructation, hiccups, sialorrhea, difficulty in swallowing, bitter taste, dry mouth, tightness of mouth, lips or tongue, duodenal ulcer, gastrointestinal bleeding, burning sensation of the tongue; *cardiovascular*—nonspecific ECG changes, palpitations, hypertension, flushing, phlebitis; *hematological*—hemolytic anemia (1 case); *dermatological*—sweating, edema, hair loss, pallor, rash, bad odor; *musculoskeletal*—low back pain, muscle spasm and twitching, blepharospasm, musculoskeletal pain; *respiratory*—feeling of pressure in the chest, cough, hoarseness, bizarre breathing pattern, postnasal drip; *urogenital*—urinary frequency, retention, incontinence, hematuria, nocturia, and one report of interstitial nephritis; *special senses*—blurred vision, diplopia, dilated pupils, activation of latent Horner's syndrome; *other*—fever, hot flashes, weight gain or weight loss.

Nausea, anorexia and vomiting usually obviated by temporary dosage reduction and/or administration with food. If cardiac arrhythmias occur, discontinue and institute other antiparkinson therapy. Reduce dosage when involuntary movements occur.

The following have been noted: elevation of BUN, SGOT, SGPT, LDH, bilirubin, alkaline phosphatase or PBI; occasionally, reductions in WBC, hemoglobin and hematocrit; elevations of uric acid with use of colorimetric method but not with uricase; rarely, positive Coombs test; dark sweat and urine.

Dosage and Administration: Because of the strong possibility of adverse reactions and the necessity for individualizing therapy, the physician should thoroughly familiarize himself with the information in the package insert before instituting therapy.

How Supplied: *Tablets*, pink, scored, containing 0.25 Gm levodopa (imprinted Roche 57) or 0.5 Gm levodopa (imprinted Roche 56)—bottles of 100 and 500.

Capsules, containing 0.25 Gm levodopa (pink and beige, imprinted Roche 55) or 0.5 Gm levodopa (pink, imprinted Roche 54)—bottles of 100 and 500.

Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, N.J. 07110

(Continued from Page 59)

should further recognize that at this time, for the attorney to protect fully the interest of his client, it may be necessary or advisable for the attorney to request a supplemental and amplified report in the preparation for the trial of the case, and it is the duty of the physician to cooperate with the attorney where authorized by the patient to furnish such supplemental and amplified medical report.

7. In some cases, it should be recognized by both the attorney and the physician that it is necessary or most desirable that a conference or conferences be had between the attorney and the physician in advance of the physician appearing as a witness in the trial of the case, whereby the physician is afforded an opportunity of discussing with the attorney the medical aspects of the case from the physician's viewpoint, particularly any technical medical matters pertaining thereto. An opportunity is thus afforded to the attorney of discussing with the physician the legal rules and the position occupied by the physician as a witness in the trial of the case, resulting in mutual cooperation for the best interest of the patient of the physician and the client of the attorney in the presentment of the case in court. Where, however, the physician and attorney mutually agree that such a conference is unnecessary, it should be avoided in the interest of saving the time of both the physician and the attorney. Where such conference or conferences are deemed necessary or advisable, the attorney should recognize a duty to arrange for the time and place for such conference or conferences as most convenient and suitable to the physician.

8. It is the duty of the attorney, in accordance with the ethics of his profession, that under no circumstances should he seek or attempt, in any manner, to persuade the physician to distort or color his testimony.

9. The physician should recognize the moral, as well as the legal, obligation of appearing in court as a witness on behalf of his patient, and should understand that medical testimony is frequently indispensable to prove or disprove medical claims presented in a case.

The Physician as a Witness In the Trial of the Case

1. It is required that parties, attorneys and witnesses, including physicians who are called to testify, recognize that the administration of justice by the courts and the trial of cases by the judges thereof cannot depend upon the convenience of such persons.

2. The attorney owes a duty to the physician who is to be a witness in the trial of the case to notify him as far in advance as possible as to when he is to be needed to testify, and to keep him informed and advised as to any changes with respect to the time of his appearance in court as the trial develops.

3. The attorney should notify the physician promptly of any settlement or other development during the trial of the case, the result of which is to eliminate the calling of the physician as a witness in the trial, so that the physician, who likely has set aside the time in which he is expected to be in court as a witness, may have the opportunity of making other commitments for this time.

4. The attorney should have available for the physician when he appears as a witness, all hospital and any other records which the attorney and physician have theretofore agreed shall be at the place of trial for the physician's use.

5. The physician should attend court at the time appointed. The attorney should appreciate, however, that a physician has continuing and often unpredictable responsibilities to his patients. Insofar as the attorney is able, he should make arrangements to permit the physician to testify with a minimum of inconvenience and delay to him.

6. The physician while testifying should answer questions as concisely and objectively as possible, with a terminology, when permissible, which will be most understandable to a jury of laymen.

7. If the physician is asked a question to which he does not know the answer, he should so state and make no attempt to speculate or guess or theorize or give answers not responsive to the question propounded, and the physician should not volunteer testimony.

8. In the giving of testimony, the physician, under no circumstances, should permit any bias, prejudice or favoritism or personal interest to influence or affect his testimony.

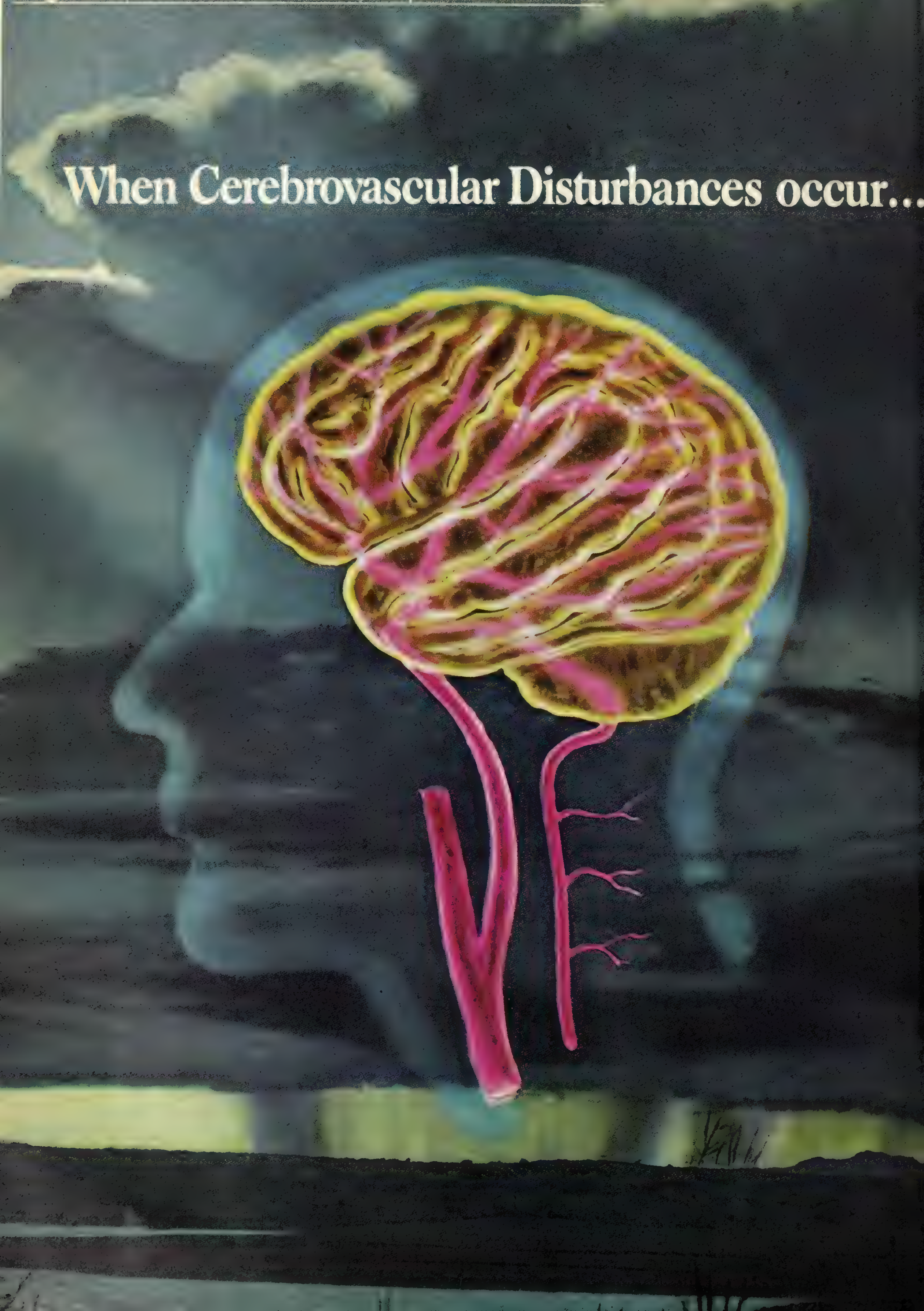
9. When questioning the physician-witness, an attorney should at all times refrain from unwarrantedly browbeating or badgering the physician. A physician testifying as a witness should know that if and when he feels that an attorney is improperly or unfairly conducting an examination of him as a witness, the physician may address the court and inquire if he is required to submit to such treatment.

10. The attorney owes a duty to the physician-witness to prepare and propound all questions to the witness in such form and manner as will permit a clear understanding and a forthright answer from the physician-witness.

11. An attorney who calls a physician to testify as an expert witness should, in advance of the

(Continued on Page 68)

Mead Johnson—pharmaceuticals created for your specialized clinical needs


When Cerebrovascular Disturbances occur...

...with episodes of vertigo, headache, confusion, sensory loss, slurred speech, consider

VASODĪLAN®

(ISOXSUPRINE HCl)

to help relieve symptoms by preventing vasospasm and increasing cerebral blood flow

New 20 mg. strength now available: Vasodilan 20 mg. tablets for greater dosage simplicity and convenience. Recommended *initial* dose: one 20 mg. tablet q.i.d.

Although not all clinicians agree on the value of vasodilators in vascular disease,[1] several investigators[2-5] have reported favorably on the effects of isoxsuprine on cerebral blood flow. Effects have been demonstrated both by objective measurement[2,5] and observation of clinical improvement.[2-4]

Indications: Cerebrovascular insufficiency, arteriosclerosis obliterans, diabetic vascular diseases, thromboangiitis obliterans (Buerger's disease), Raynaud's disease, postphlebitic conditions, acroparesthesia, frostbite syndrome and ulcers of the extremities (arteriosclerotic, diabetic, thrombotic). **Composition:** VASODĪLAN tablets, isoxsuprine hydrochloride 10 mg. and 20 mg. **Dosage:** Oral—10 to 20 mg. t.i.d. or q.i.d. **Contraindications and Cautions:** There are no known contraindications to recommended oral dosage. Do not give immediately postpartum or in the presence of arterial bleeding. **Side Effects:** Occasional palpitation and dizziness can usually be controlled by dosage reduction. As intramuscular administration of 10 mg. or more may cause brief hypotension and tachycardia, single intramuscular doses exceeding this amount are not recommended. Complete details available in product brochure from Mead Johnson Laboratories. **References:** (1) Fazekas, J. F.; Alman, R. W.; Ticktin, H. E.; Ehrmantraut, W. R., and Savarese, C. J.: Angiology *15:*No. 2 (Feb.) 1964. (2) Horton, G. E., and Johnson, P. C., Jr.: Angiology *15*:70-74 (Feb.) 1964. (3) Clarkson, I. S., and LePere, D. M.: Angiology *11*:190-192 (June) 1960. (4) Dhrymiotis, A. D., and Whittier, J. R.: Curr. Ther. Res. *4*:124-128 (April) 1962. (5) Whittier, J. R.: Angiology *15:*82-87 (Feb.) 1964. © 1970 MEAD JOHNSON & COMPANY • EVANSVILLE, INDIANA 47721 75970

Mead Johnson
LABORATORIES

(Continued from Page 65)

physician's appearance in court, advise the physician of his intention to qualify and question him as an expert witness, and where it is proposed to use a hypothetical question, should in advance of the trial converse with the physician and explain to him the use of such hypothetical question so that at the time the physician in his capacity as an expert witness is propounded such question, he will have a reasonable understanding of the use of the hypothetical question and the limitations with reference to his answer to such form of question.

Compensation for Services of Physicians

1. It is the duty of the attorney, where necessary, to explain to his client the physician's bill for services and the itemization thereof. In cases where the physician aided in preparing the case but did not have the opportunity to testify or failed to testify because of a settlement prior to his being called as a witness, it is the responsibility of the attorney to pay to the physician a reasonable fee for services rendered in preparation for trial of the case.

2. A physician who, at the request of an attorney, furnishes a medical report authorized by the patient, should receive a nominal fee for this service, and it is the duty of the attorney to cooperate with the physician to see that he receives such fee. If such medical report requires extraordinary services in its preparation either as to time and contents, or the case is of such a nature that the medical aspects thereof require the physician to have a conference or conferences with the attorney, or to furnish subsequent supplemental and/or amplified medical reports, the physician is entitled to a reasonable compensation for such professional services rendered, and it is the duty of the attorney to cooperate to see that such physician receives reasonable compensation in rendering such professional services. Where, after an original medical report, the physician is requested to perform further services in assisting in the preparation of the case for trial by furnishing supplemental or amplified reports and conferring with the attorney or rendering other services, it is recommended that when feasible, an agreed fee for such services be determined in advance after consultation with the attorney.

3. Where it appears that the patient is indigent or unable to make payment, the right to compensation for services in assisting the attorney in the preparation of the case for trial may be waived by the physician, or where it appears that the financial status of the patient is such that ordinary reasonable compensation to the physician for his services will work a hardship, the physician may take this into consideration in determining his fee for services in assisting the attorney in the preparation of the case for trial.

4. Where a physician testifies as a witness, under no circumstances should the physician charge for his time as a witness, or his fee, if qualified and testifying as an expert witness, be contingent or determined by the amount of the recovery of the patient in the litigation, or the success or lack of success of the patient's case.

5. Compensation for the services of a physician in connection with assisting in the preparation of the case or for his appearance as a witness in court should be on a reasonable basis and based on the time and nature of the services performed.

6. It is the duty of the attorney to cooperate fully with the physician by assisting the physician to obtain payment for services properly rendered by the physician to his patient in the physician-patient relationship. It is the further duty of the attorney to cooperate with the physician to obtain payment from the patient for services rendered by the physician to the attorney in the preparation and/or trial of the patient's case.

Inter-Professional Courtesy and Understanding

1. For the medical and legal professions to perform the full duties owed to society by each, it is required that the members of each profession extend toward the other full courtesies and amenities and engage in a mutual understanding of the problems of each other.

2. It is required that the attorney understand the vast demands made upon the time of the members of the medical profession, and at all times to avoid unnecessarily claiming the time of any physician either in the attorney's preparation of the case for trial, or while engaged in the trial of the case.

3. It likewise is required that the physician understand that in many instances the legal rights to the patients, in litigation having medical aspects, may be properly protected only by the attorney seeking and obtaining the time and services of the physician in the preparation and trial of the case.

4. Courtesy requires, where necessary, that the attorney assist and enlighten the physician with respect to his position as a witness in the trial of the case, his role as a witness, and the rules to be observed in connection with the matter of giving testimony in court.

5. Courtesy requires of the physician that he aid the attorney so that the attorney may be enlightened on the highly specialized medical aspects of the case, and may be assisted in properly pre-

(Continued on Page 79)

"Welcome back, Ann"
As adjunctive therapy
DOUBLE STRENGTH
Orenzyme®
Bitabs One tablet q.i.d.
Trypsin: 100,000 N.F. Units, Chymotrypsin: 8,000 N.F. Units; equivalent in tryptic activity to 40 mg. of N.F. trypsin
Reduces swelling
Hastens healing
Speeds recovery
trauma

A
BUILDING BLOCK
TO RECOVERY

One tablet q.i.d.

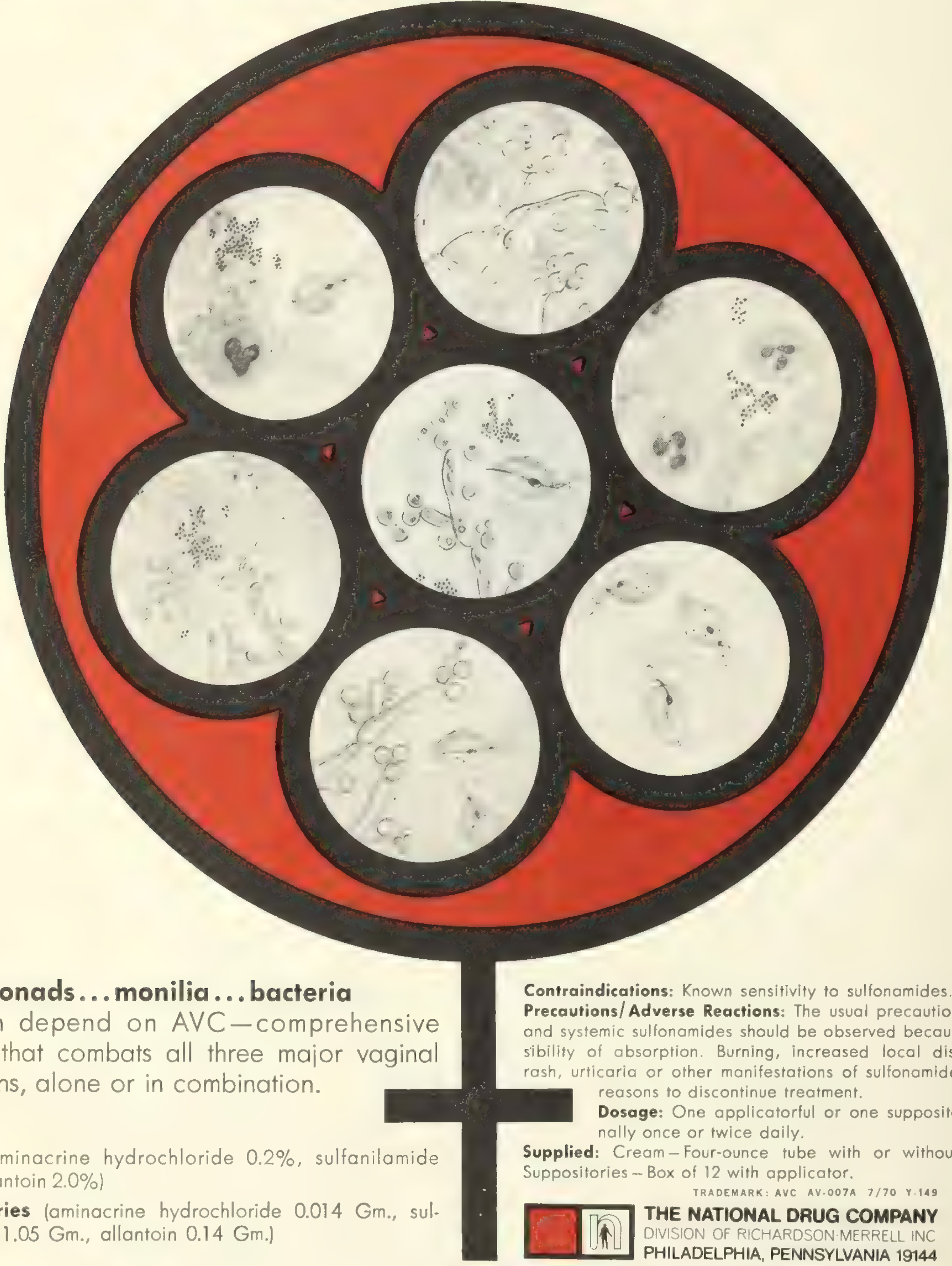
Indications: When used as adjunctive therapy for the rapid resolution of inflammation and edema, good results have been obtained in:
☐ Accidental Trauma ☐ Postoperative Tissue Reactions.
Other conventional measures of treatment should be used as indicated. In infection, appropriate anti-infective therapy should be given.
Contraindications: ORENZYME BITABS should not be given to patients with a known sensitivity to trypsin or chymotrypsin.
Precautions: It should be used with caution in patients with abnormality of the blood clotting mechanism such as hemophilia, or with severe hepatic or renal disease. Safe use in pregnancy has not been established.
Adverse Reactions: Adverse reactions with ORENZYME have been reported infrequently. Reports include allergic manifestations (rash, urticaria, itching), gastrointestinal upset and increased speed of dissolution of animal-origin surgical sutures. There have been isolated reports of anaphylactic shock, albuminuria and hematuria. Increased tendency to bleed has also been reported but, in controlled studies, it has been seen with equal incidence in placebo-treated groups. (See Precautions.) It is recommended that if side effects occur medication be discontinued.
Dosage: One tablet q.i.d.

THE NATIONAL DRUG COMPANY
DIVISION OF RICHARDSON-MERRELL INC.
PHILADELPHIA, PENNSYLVANIA 19144
TRADEMARK BITABS U.S. PATENT NO 3,004,893 9/70 0-009A 161

Orenzyme® Bitabs

Trypsin: 100,000 N.F. Units, Chymotrypsin: 8,000 N.F. Units; equivalent in tryptic activity to 40 mg. of N.F. trypsin

The causes of vaginitis are multiple



Trichomonads . . . monilia . . . bacteria

You can depend on AVC—comprehensive therapy that combats all three major vaginal pathogens, alone or in combination.

AVC

Cream (aminacrine hydrochloride 0.2%, sulfanilamide 15.0%, allantoin 2.0%)

Suppositories (aminacrine hydrochloride 0.014 Gm., sulfanilamide 1.05 Gm., allantoin 0.14 Gm.)

Contraindications: Known sensitivity to sulfonamides.
Precautions/Adverse Reactions: The usual precautions for topical and systemic sulfonamides should be observed because of the possibility of absorption. Burning, increased local discomfort, skin rash, urticaria or other manifestations of sulfonamide toxicity are reasons to discontinue treatment.
Dosage: One applicatorful or one suppository intravaginally once or twice daily.
Supplied: Cream—Four-ounce tube with or without applicator. Suppositories—Box of 12 with applicator.

TRADEMARK: AVC AV-007A 7/70 Y-149

THE NATIONAL DRUG COMPANY
DIVISION OF RICHARDSON-MERRELL INC
PHILADELPHIA, PENNSYLVANIA 19144

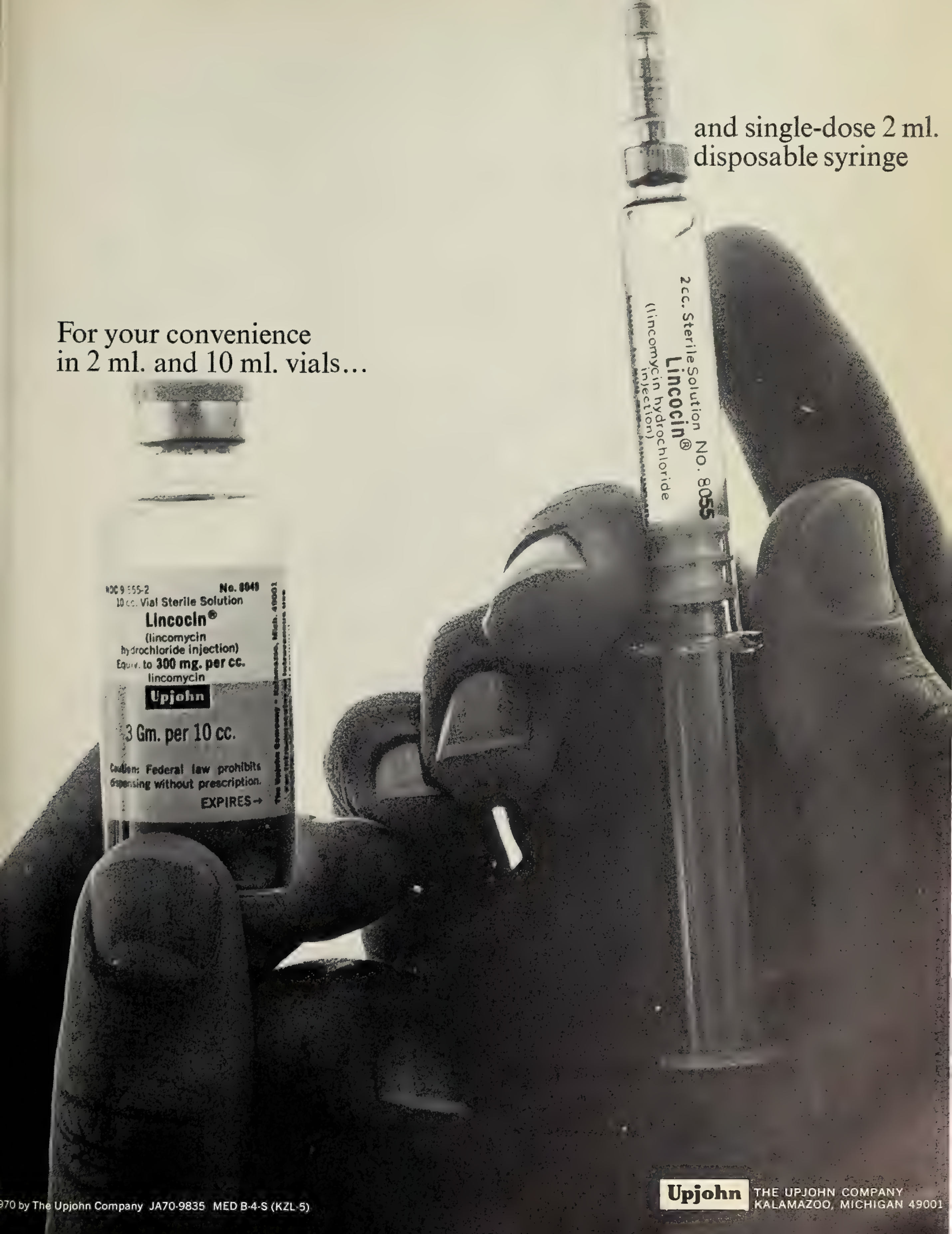
AVC

The treatment is singular

sterile solution (300 mg per ml.)

Consider Lincocin®

(lincomycin hydrochloride monohydrate, Upjohn)


NDC 9-555-2 No. 8049
10 cc. Vial Sterile Solution
Lincocin®
(lincomycin
hydrochloride injection)
Equiv. to 300 mg. per cc.
lincomycin
Upjohn
3 Gm. per 10 cc.
Caution: Federal law prohibits
dispensing without prescription.
EXPIRES→
2cc. Sterile Solution No. 8055
Lincocin®
(lincomycin hydrochloride
injection)

For your convenience
in 2 ml. and 10 ml. vials...

and single-dose 2 ml.
disposable syringe

Upjohn THE UPJOHN COMPANY
KALAMAZOO, MICHIGAN 49001

970 by The Upjohn Company JA70-9835 MED B-4-S (KZL-5)

When irritable colon feels like this

The blowfish, a small species of fish, reacts to stress or fright by puffing itself up with air. After about a dozen noisy gulps the belly is balloon-shaped and hard. When replaced in the water the air i quickly expelled, and the fish sinks to the bottom.

...in the presence of spasm or hypermotility, gas distension and discomfort, **KINESED**® provides more complete relief:

☐ belladonna alkaloids—for the hyperactive bowel ☐ simethicone—for accompanying distension and pain due to gas ☐ phenobarbital—for associated anxiety and tension

Composition: Each chewable, fruit-flavored, scored tablet contains: 16 mg. phenobarbital (warning: may be habit-forming); 0.1 mg. hyoscyamine sulfate; 0.02 mg. atropine sulfate; 0.007 mg. scopolamine hydrobromide; 40 mg. simethicone.
Contraindications: Hypersensitivity to barbiturates or belladonna alkaloids, glaucoma, advanced renal or hepatic disease.
Precautions: Administer with caution to patients with incipient glaucoma, bladder neck obstruction or urinary bladder atony. Prolonged use of barbiturates may be habit-forming.
Side effects: Blurred vision, dry mouth, dysuria, and other atropine-like side effects may occur at high doses, but are only rarely noted at recommended dosages.
Dosage: Adults: One or two tablets three or four times daily. Dosage can be adjusted depending on diagnosis and severity of symptoms. Children 2 to 12 years: One half or one tablet three or four times daily. Tablets may be chewed or swallowed with liquids.

STUART PHARMACEUTICALS | Pasadena, California 91109 | Division of ATLAS CHEMICAL INDUSTRIES, INC.

(from the Greek **kinetikos**,
to move,
and the Latin **sedatus**,
to calm)

KINESED®

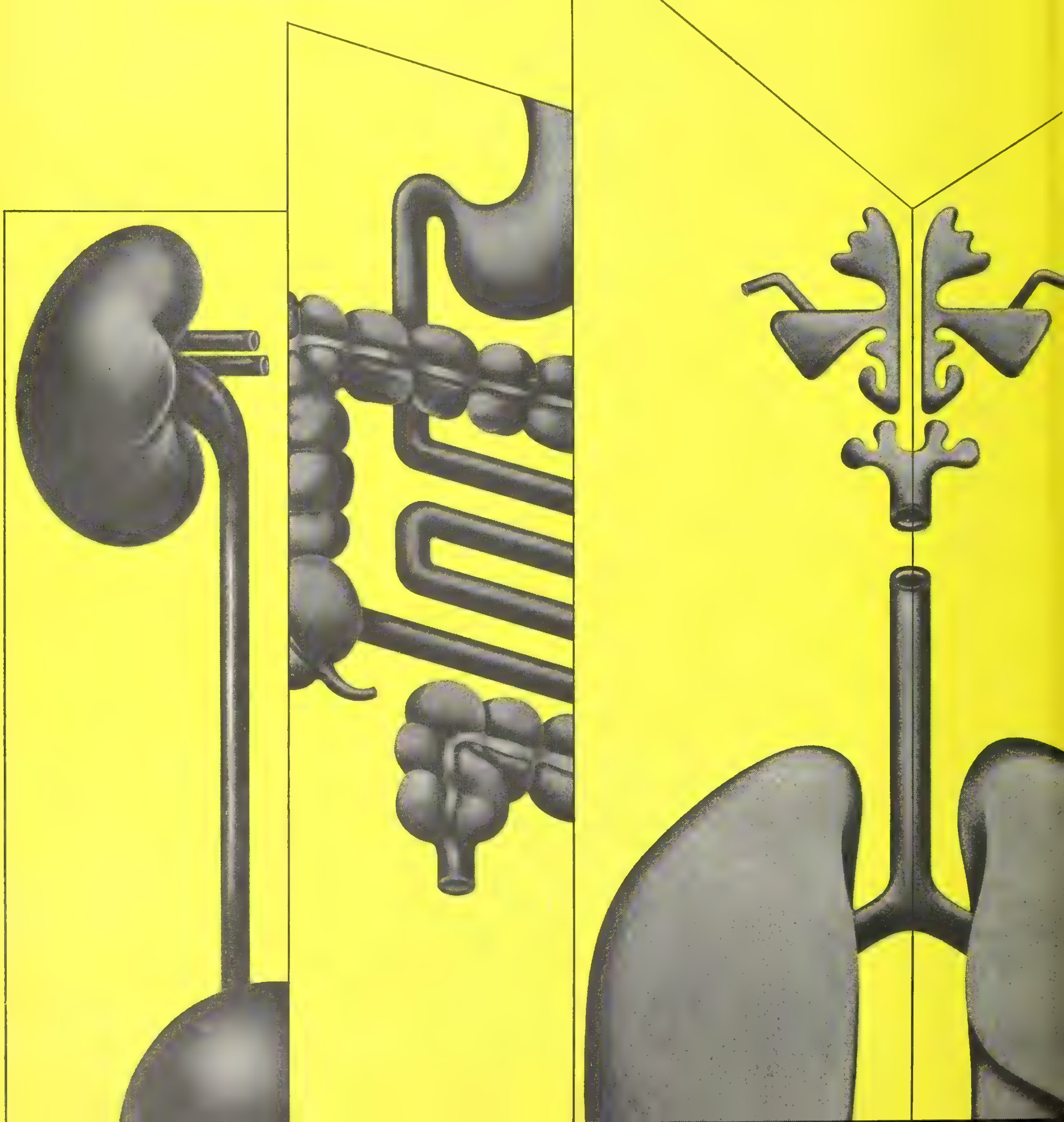
antispasmodic/sedative/antiflatulent

Tract Record.

A record of clinical efficacy in treating bacterial infections of the respiratory, genitourinary and gastrointestinal tracts caused by susceptible strains of pneumococci, H. influenzae, staphylococci, streptococci, Klebsiellae, E. coli, Enterobacter, Shigella.

A record of years of dependable broad-spectrum activity.

A record of high urine and serum antibiotic levels all with a 500mg. potency, b.i.d. convenience and low prescription cost.



Tetrex®
bidCAPS®
(500 mg. tetracycline phosphate complex)

For complete information consult Official Package Circular.
(3) 4/2/70

Indications: Infections of respiratory, gastrointestinal and genitourinary tracts and skin and soft tissues due to tetracycline-sensitive organisms. In staphylococcal infections, indicated surgical procedures should be performed.

Contraindications: Hypersensitivity to tetracyclines.

Warnings: Photodynamic reactions have been produced by tetracyclines. Natural and artificial sunlight should be avoided during therapy. Stop treatment if skin discomfort occurs. With renal impairment, systemic accumulation and hepatotoxicity may occur. In this situation, lower doses should be used and serum estimations may be necessary during prolonged therapy. Tooth staining and enamel hypoplasia may be induced during tooth development (last trimester of pregnancy, neonatal period and childhood).

Precautions: Mycotic or bacterial superinfections may occur. Infants may develop increased intracranial pressure with bulging fontanels. Cases of gonorrhea with a suspected primary lesion of syphilis should have darkfield examinations before receiving treatment. In all other cases where concomitant syphilis is suspected, monthly serological tests should be performed for a minimum of 4 months.

Adverse Reactions: Glossitis, stomatitis, nausea, diarrhea, flatulence, proctitis, vaginitis, dermatitis, and allergic reactions may occur.

Usual Adult Dose: One Gm./day in 2 or 4 equally divided doses. Continue therapy for ten days in Group A beta-hemolytic streptococcal infections. Administer one hour before or two hours after meals.

Supplied: Capsules—250 mg. in bottles of 16 and 100. bidCAPS—500 mg. in bottles of 16 and 50.

A.H.F.S. Category 8:12

BRISTOL

BRISTOL LABORATORIES
Division of Bristol-Myers Co.
Syracuse, New York 13201

'We are impressed'

SAMA members report impressions of Annual Session

Eight medical students from Michigan's three medical schools were special guests at the 1970 MSMS House of Delegates meeting Sept. 20-22 in Detroit.

They were Marek Bozdech, David Hoekenga and David Sperry of Wayne State University; Jeffrey Callen and Steven L. Rodis of the University of Michigan, and Michael Shier, David Vander Wall and Paul T. Werner of Michigan State University.

Six of the eight voluntarily reported their thoughts and impressions of the House meeting on the final day of proceedings. Their remarks, made by Mr. Werner, so impressed the delegates that they are reprinted here for the benefit of those Michigan physicians who were unable to attend the meeting:

Each of us extends to all of you his very sincere appreciation for the opportunity to sit in on your work and view the activities of the Michigan State Medical Society. Knowing little or nothing of the actions of this group before arriving, we have all learned much. We are impressed with the orderly and democratic processes whereby business is transacted. Equally impressive is the broad representation of Michigan practitioners and the high degree of participation of each of them. The free exchange of ideas, coupled with open-minded discussion, proved to us that here is an open forum for the discussion of medical problems and goals. We recognize here a demonstration of how ra-

(Continued on Page 76)

Postscript:

The recommendation of the medical students—that a student delegate from each of the medical schools be seated as a full voting member—was well received by the MSMS House of Delegates.

Accordingly, a resolution was introduced and passed adding to the composition of the House of Delegates a delegate from each Student American Medical Association chapter of each established medical school in the State of Michigan.

SEVEN SAMA MEMBERS were presented at the opening meeting of the 1970 MSMS House of Delegates meeting Sept. 20 in Detroit. From left, standing, are Steven L. Rodis, Ph.D., University of Michigan; David Vander Wall, and Paul T. Werner, both of Michigan State University. Seated, left to right, are Marek Bozdech and David Hoekenga, Wayne State University, Jeffrey Callen, University of Michigan, and Michael Shier, Michigan State University.

SAMA MEMBERS/Continued

tional men and women *can* make the democratic process work for them.

Our reception by the various reference committees has been overwhelming. The members of these committees actively sought student opinion on the various pending resolutions. You did more than just ask opinions; for, when given, our ideas were considered and sometimes incorporated into final decisions. This demonstrated that it is possible for the medical student to influence his elders and that these elders value our presence as more than just observers.

As medical students who are concerned with the professional aspects of many of the resolutions that you have considered, and as people who are concerned with the human impact of these proposals, we would like to commend you for your leadership in several areas:

The various resolutions making it easier for persons with drug and alcohol related problems to seek and receive help from the medical profession fulfill many of the ideals to which we ourselves subscribe.

We commend you for considering a resolution calling for the repair of damage to the Great Lakes. This shows us that you as practitioners are worried about one of the problems that we as students find intolerable—the destruction of the environment around us.

With pleasure we watched you consider resolutions that would expand and improve medical education in this State. You considered the establishment of well-funded departments of Family Practice at this State's medical schools, the reworking of the requirements for pre-medical education, and the shortening of the time required to produce a medical doctor.

And, perhaps most importantly, this body worked in many areas, in many ways to find the means that might bring more and better care to the medical consumers of Michigan. Several proposals to encourage the distribution of physicians to geographic areas of great need; other proposals to increase the output of family-oriented generalists; and a resolution that called for continued expansion of the medical school census revealed the high priority you place on the care of the patient. Furthermore, your thoughts on the role and training of paramedical personnel shows your willingness to explore the use of this means whereby time for patient care might be rapidly expanded.

In all of these areas we would strongly encourage your continued dedication in seeking workable solutions.

None of us realized that the main topic would be consideration of the relationship of the medical society to Michigan Medical Services. Therefore, we came like late spectators at a vigorous tennis match. We saw two sides hard at work but we were not sure how the game had progressed to this point. We must honestly admit that Blue Shield is not one of the issues that medical students now worry about. But, at the same time, we acknowledge that in a few years each of us *will* be involved and interested, and we thank you for the time, effort, thought, and study that you invested in the consideration of the Blue Shield program.

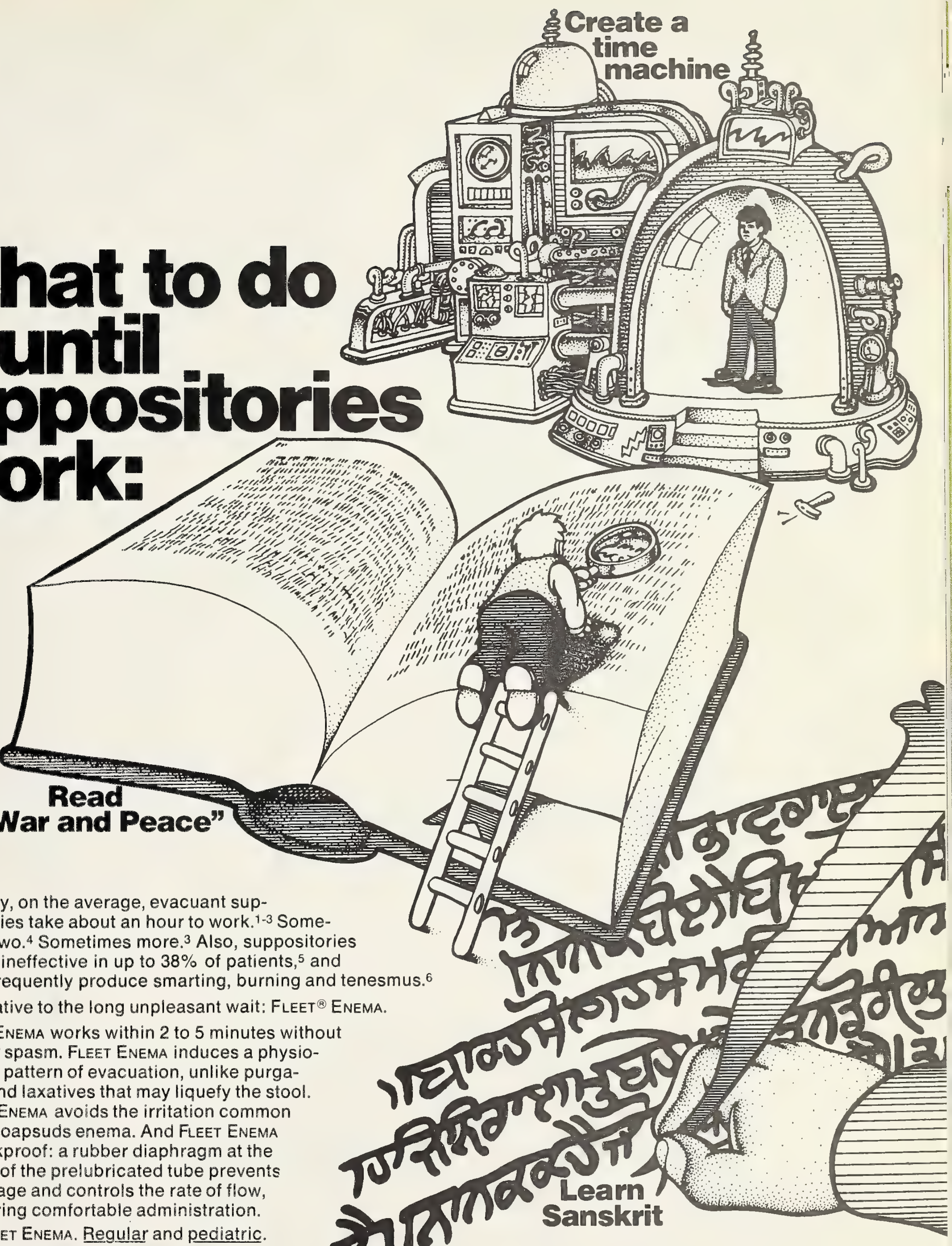
As I said earlier, we have all been impressed with the manner in which this assembly served as a true open forum for new ideas. Ladies and Gentlemen, you have shown yourselves openminded and willing to listen to the thoughts of others. We are sure, that while you consider the areas that physicians find important, you are also willing to consider the areas that many medical students find important. Therefore, we readily insert some of these ideas in the open forum that you have created.

During this session, you have been asked to reaffirm the 1968 resolution on abortion. This resolution represents a significantly progressive stance on the question of abortion when viewed from the perspective of just a few years ago. But, as polls have shown, a majority of medical students believes that the decision on an abortion should concern only the patient and her doctor. The students feel that the decision to perform an abortion should be bound by the same considerations that determine the decision to perform any other operative procedure.

Students will be pleased to learn that you rec-

(Continued on Page 78)

What to do until suppositories work:



Actually, on the average, evacuant suppositories take about an hour to work.[1-3] Sometimes two.[4] Sometimes more.[3] Also, suppositories can be ineffective in up to 38% of patients,[5] and not infrequently produce smarting, burning and tenesmus.[6]

Alternative to the long unpleasant wait: FLEET® ENEMA.

FLEET ENEMA works within 2 to 5 minutes without pain or spasm. FLEET ENEMA induces a physiological pattern of evacuation, unlike purgatives and laxatives that may liquefy the stool. FLEET ENEMA avoids the irritation common with soapsuds enema. And FLEET ENEMA is leakproof: a rubber diaphragm at the base of the prelubricated tube prevents seepage and controls the rate of flow, assuring comfortable administration.

FLEET ENEMA. Regular and pediatric. Both completely disposable—like suppositories, only better. Much better.

Fleet
enema

Fleet
pharmaceuticals

C. B. FLEET CO., INC.
Lynchburg, Va. 24505

Warning: Frequent or prolonged use of enemas may result in dependence. Take only when needed or when prescribed by a physician. Do not use when nausea, vomiting or abdominal pain is present.
Caution: Do not administer to children under two years of age unless directed by a physician.

References: 1. Blumberg, N.: Med Times 91:45, Jan., 1963. 2. Sweeney, W. J., III: Amer J Obstet Gynec 85:908, Apr. 1, 1963. 3. Weinsaft, P.: J Amer Geriat Soc 12:295, Mar., 1964. 4. Baydoun, A. B.: Amer J Obstet Gynec 85:905, Apr. 1, 1963. 5. Feder, I. A., Flores, A. and Weiss, J.: Amer J Gastroent 33:366, Mar., 1960. 6. Smith, J. J. and Schwartz, E. D.: Western J Surg 72:177, May-June, 1964.

ognize the problems of drug abuse and approve the actions you have taken thus far to reduce the problem. They urge the continuation of programs that increase the drug education of the public and decrease the legal and social pressures that inhibit prompt and adequate treatment of drug abuse as a disease.

Most students view the medical profession as both an integral part of the system that can restore our environment, and a leader in the efforts to do so. These students would like to see organized medicine come down hard on environmental polluters and force them to clean up the messes they have made.

Students look with acute alarm at the unchecked expansion of the world's population. They watch as the rapid increases eat up the hard-won gains in medical care and physician numbers. We are convinced that organized medicine must actively campaign for zero population growth. This would allow for increases in the quality of medicine and a chance to bring medical care in sufficient quantity to areas that have not enjoyed such care before.

Medical students in Michigan are asking your help to decrease the disparity between the percentage of minority peoples in Michigan's population and the percentage of minority physicians serving the State.

Finally, we feel a responsibility to tell you that a sizeable minority of medical students view organized medicine with distrust. And, another large group of students are indifferent to organized medicine. Many of *us*—the six who wrote these remarks—in fact, came with negative impressions or, at best, indifference as to what would occur here. However, in the past few days we have seen the workings of this organization; we have heard the discussions; we have judged the proceedings. To our surprise, we found a vital, responsive, democratic group, actively endeavoring to better the practice and availability of medical care in the State. If a mere three days of exposure by observation could effect this change, we certainly feel that more active participation of student leaders in the Michigan State Medical Society would provide means of disseminating information concerning the society. And, it would provide tangible evidence that this society does value *and* evaluate student opinion in its actions. Therefore, we ask that you consider seating a student delegate from each of the medical schools as a full voting member of the House of Delegates each year.

Specialized ★ Service
IN
PROFESSIONAL LIABILITY INSURANCE
is a high mark of distinction
THE
MEDICAL PROTECTIVE COMPANY
FORT WAYNE, INDIANA
Professional Protection Exclusively since 1899

DETROIT OFFICE: R. K. Wind and J. K. Galloway, Representatives
27200 Lahser Road, Southfield 48075, Telephone: (Area Code 313) ELgin 3-4848 or 444-1439

GRAND RAPIDS OFFICE: G. J. Haworth, Representative
422 Federal Square Building, Grand Rapids 49502 Telephone: 616-454-4477

In memoriam

Daniel E. Cohn, M.D.
Detroit

Daniel E. Cohn, M.D., a past president of the Wayne County Medical Society, died Oct. 25 at the age of 69.

Doctor Cohn was on the staffs of Grace and Sinai Hospitals in Detroit and was an internist. He was graduated from the University of Michigan Medical School and belonged to the Detroit and American Diabetes Associations.

James E. Cole, M.D.
Detroit

James E. Cole, M.D., former chief of general surgery at Highland Park General Hospital, died Nov. 8 at the age of 75.

Doctor Cole was also a past president of the Wayne State University Medical Alumni, and was a member of the American College of Surgeons, Pan Pacific Surgical Society, the American Society of Abdominal Surgeons, the Detroit Surgical Society and the Academy of Surgery of Detroit.

Daniel J. Leithauser, M.D.
Grosse Pointe

Daniel J. Leithauser, M.D., of Grosse Pointe, a founding member of the American Board of Abdominal Surgery, died Oct. 22 at the age of 83.

Doctor Leithauser was a life member of MSMS and the AMA, and also held a life membership in the American College of Surgeons. He was noted for his work in early ambulation.

Doctor Leithauser was graduated from the Ohio State University School of Medicine and was affiliated with St. Joseph Mercy and Deaconess Evangelical hospitals of Detroit. He had received the highest award of his alma mater and was the author of many medical papers.

Roland G. B. Marsh, M.D.
Tecumseh

Roland G. B. Marsh, M.D., Tecumseh general practitioner for 42 years, died Nov. 6 at the age of 76.

Doctor Marsh held a life membership in MSMS and was a past president of the Lenawee County Medical Society. He was affiliated with Herrick Memorial Hospital in Tecumseh.

Doctor Marsh was a graduate of the Detroit College of Medicine and Surgery.

Max M. Mosen, M.D.
Detroit

Max Mordecai Mosen, M.D., a Detroit general practitioner, died Nov. 8 at the age of 66.

Doctor Mosen was a graduate of the Wayne State University School of Medicine and was affiliated with North Detroit General Hospital. He had practiced in Detroit since 1933.

Maurice L. Richardson, M.D.
East Lansing

Maurice L. Richardson, M.D., Lansing physician for nearly 20 years, died Nov. 6 at the age of 83.

Doctor Richardson had been chief of the radiology department at Lansing's Sparrow Hospital from 1943 to 1959 and retired from the department in 1965. He had also been assistant professor of pathology at Western Reserve University and professor of pathology at Baylor University.

Doctor Richardson was a life member of the Ingham County Medical Society and MSMS, and was also a retired member of the American College of Radiology.

MD-LAWYER PRINCIPLES/Continued

(Concluded from Page 68)

senting in the trial of the case the medical phases involved through sufficient understanding with the physician to conduct an intelligent examination of the physician-witness.

6. Courtesy requires that the attorney cooperate with the physician to minimize as far as practicable the time required for the physician to remain in court.

7. If an attorney plans to have a subpoena served upon a physician, wherever practicable, the physician should be notified in advance and service made under arrangements convenient and acceptable to the physician.

8. Courtesy requires that wherever practicable, the attorney and physician should consult in advance with reference to the fee of the physician to be charged for his time spent in attendance in court as a witness.

9. Courtesy requires that where, by requirement of statute, the amount of an expert's fee may be set only by the court, the physician be notified thereof in advance, with the further assistance of the attorney that he will petition the court, at the proper time, for an order setting a proper and reasonable fee for the physician's services as an expert witness.

For a good return on investment and low element of risk

Laundromat
Self Service Laundry and Drycleaner

Consider Laundromat® Stores

Since 1946, Laundromat Self-Service Laundry and Drycleaning Stores have proven to be good business investments.

There are no franchising charges. No annual fees. Westinghouse Equipment and the Laundromat Store name are known and trusted the world over. Call or write today for information.

Wolverine Coin-Op Sales Co.
1009 Detroit Street
Flint, Michigan 48503
(313) 232-2841

Authorized Distributors for Westinghouse Self-Service Laundry and Drycleaning Equipment and the Laundromat Store License.

You can be sure if it's Westinghouse

County societies

Kalamazoo Committee Recommends Actions To Academy

The Kalamazoo Academy of Medicine's Health Care Committee has made four major recommendations for academy action in the fields of public relations and delivery of health care. The committee was charged by the academy in May to "respond to all charges and allegations which tend to discredit the medical profession," and to study the health care needs of Kalamazoo County, to develop programs to correct them.

The committee's recommendations are: (1) that the academy give assistance in obtaining physicians, preferably black, to man a health care facility located on the north side of Kalamazoo; (2) that the education of patients in health care measures be a constant goal; (3) that Borgess and Bronson Hospitals be encouraged to expand their outpatient general surgical and medical clinics. The committee also acknowledged the limitation of the Academy of Medicine to do much more than discuss various aspects of the problems of medical care and to suggest and encourage attitudes and actions consistent with the delivery of a quality of medical care which is needed and demanded by a society that expects such care as a natural right.

The report suggests that the community hospitals may ultimately be the providers of all the health care needs of the patient consumer—unless the private segment of physicians comes up with something better.

Oakland Society Prepares Professional Code

The Medical-Legal Liaison Committee of the Oakland County Medical Society has prepared an Inter-Professional Code for County Physicians and Attorneys. The code, to assist physicians and lawyers in their daily relationships, was published in the October issue of the Oakland County society's *Bulletin*. The code tries to clarify problems which have characteristically caused misunderstanding and attrition. It deals with reports, the physician at the trial or deposition, subpoenas, duty to testify, and consideration and disposition of complaints.

Someone acutely ill needs this bed.

It's available because of Medicenter.

Because of Medicenter, this hospital bed can be used by someone who needs it. That's what Medicenter is all about. A recuperative care facility specializing in the needs of patients who no longer require the intensive care of a general hospital and who are on the road to recovery.

But that's only part of the Medicenter story . . . Beautifully carpeted and draped patient rooms, tasty foods, recreation facilities, physical and inhalation therapy are just a few of many luxurious health care features that make recovery in the Medicenter as pleasant and rapid as possible. The Medicenter is within minutes of acute care facilities. A professional medical staff supervises all recuperative care under the direct orders of each patient's personal physician. Room rates are nominal — about one-half the cost of general hospitals. And there's a growing list of insurance companies that already provide coverage for Medicenter recuperation.

The Medicenter is a vital addition to our community's health care system. Get to know the Medicenter soon. Your visit or inquiry is welcome anytime.

MEDiCENTER
OF AMERICA
®

A Nice Place to Get Well

Medicenter of America / Chelsea • Escanaba • Flint, Michigan

Classified Advertising

$5.00 per insertion of 50 words or less, with an additional 10 cents per word in excess of 50.

ANN ARBOR—YPSILANTI AREA. 3 yr. AMA approved, university affiliated psych. residency at mental health center offering comprehensive services to SE Mich. Teaching faculty & supervisors include U. of M. faculty, private psychiatrists & analysts, as well as hospital staff. Resident's time divided approx. equally between didactic seminars (including supervision) & clinical experience. First year ADM & Intensive Treatment Units; second & third year assigned Community Psych. and/or OPC and/or Children's unit. Additional experience in psychosomatic medicine, Univ. Mental Hygiene Clinic, and neurology. 3-year: $11,358 to $12,924. 5-yr: $12,945 to $23,197. $15,000 NIMH grants & dependency allowance ($500 per) available to eligible physicians in practice 4+ years. Contact: J. Tiziani, M.D., Ypsilanti State Hospital, Ypsilanti, Michigan 48197.

FOR SALE: Cessna 310—Excellent condition inside and out. Full IFR except no radar or DME. Licensed until April 1971. Sacrifice $14,500. Detroit City Airport, George Sentas (313) LA 1-3042 or H. A. Davis, M.D., (313) DU 6-7676 or (313) DU 6-6330.

VACATION ON FLORIDA'S GOLD COAST: 2 bedroom T-bird villa in Coral Springs. Quiet and private. 18 hole golf course, tennis, swimming pool on premises. Available year-round on monthly or weekly rental basis. Rest and recuperate that weary mind and body. Contact Dr. J. Heidenreich, Marshall, Michigan (616) 781-7997.

Physician for private industrial clinic needed. Work is varied and includes much office surgery. Hours are regular with no night work. $30 to $35,000/annum to start with rapid advancement and in quick order entrance into a profit sharing plan. We also have a pension plan, insurance program, and liberal vacation policy. Please write or call: R. R. Silver, M.D., 24425 Hoover Road, Warren, Michigan 48089 (313) 756-5800.

NEW EXPANDING OPPORTUNITIES for family physicians and physicians specializing in pediatrics, internal medicine, anesthesiology; in medically-awakening community. Contemporary, automated, 105-bed, new hospital to be completed in the fall of 1970. Present hospital to be converted into long-term unit. Patient service area 50,000 people. Medical staff leading and supporting recruitment efforts. Excellent community location, forty miles equidistant to Milwaukee or Madison. Complete educational, cultural and recreational facilities. A new medical — dental building and a 130-bed skilled care nursing home being constructed adjacent to the new hospital ready for occupancy January 1971. Immediate satisfaction in practice, income and family living. Special assistance if needed. Write or call Paul R. Glunz, M.D., Watertown Memorial Hospital, 1301 E. Main Street, Watertown, Wisconsin 53094; Telephone (414) 261-4210 for more information.

GENERAL PRACTITIONER: For pension examinations and Admitting Officer assignment. 233-bed hospital in small Michigan community offering ideal family living, a superior school system, and all seasons sports vacation-land. Full staff of highly qualified physicians; 80% of whom are Board Certified. Licensure any state. U. S. citizenship. Salary based on qualifications. Excellent fringe benefits. Non-discrimination in employment. Contact: Chief of Staff, VA Hospital, Iron Mountain, Michigan 49801.

Internist, OB-GYN, Radiologist, and Urologist needed for additional staff to established 15 man medical group in Detroit. Excellent financial opportunities and fringe benefits. Box 20, 120 West Saginaw Street, East Lansing, Michigan 48823.

POSITION OPEN NOW: Medical Society seeking full time medical director for urban-rural Lenawee County Health Department. Population 80,000. Salary $25,000. Reply Box 23, 120 West Saginaw Street, East Lansing, Michigan 48823.

FORT LAUDERDALE—new ocean front 1500 sq. ft. condominium, 2 bedrooms, 2 baths, kitchen with washer, dryer and dishwasher. Completely furnished by decorator and fully equipped. Security guards, heated pool, sauna, underground parking and private beach. Available for the months of January, February and April. No children or pets. Phone (313) 626-3326 Birmingham, Michigan.

General Practitioner Retiring: Established southwest Detroit suburban practice. Near hospitals. Modern two suite office building, air conditioned. $35,000.00, including all equipment, supplies, records and practice. Terms available. Will stay to introduce if desired. Contact: Wm. S. Lovas, M.D., 3577 Fort Street, Lincoln Park, Michigan 48146.

FOR LEASE: In the Prairie Professional Building, located in the City of Grandville, Michigan. One suite on the ground floor containing 1220 feet of area. Will be developed to your exact requirements. Ideal for the Medical or Dental profession. Also, 2500 feet of area on the lower level with attractive enclosed entrance. Lease includes all services including paved parking. Reply to Prairie St. Realty Corp., 2700 28th Street, S.W., Grand Rapids, Michigan or phone (616) 538-9000 days or evenings (616) 457-9645.

Advertisers in MICHIGAN MEDICINE are friends of the profession. By accepting their advertising we show confidence in them, their services and products. They help make the journal a quality publication. Please familiarize yourself with their services and products and let them know that you see their advertising in MICHIGAN MEDICINE.

Increase Practice Control Through MANAGEMENT By

Modern office and financial management offers realistic methods toward achievement of personal life goals. A logical outcome of PM's services is the attainment of your objectives.

OBJECTIVES

- More Time for Patient
- More Time for Leisure
- Better Collection Control
- Better Cost Control
- Assistance With Financial Planning
- Identify Business Problems
- Seek Best Solutions to Problems

PROFESSIONAL MANAGEMENT FOR PHYSICIANS AND DENTISTS
P.M.
since 1932

PROFESSIONAL MANAGEMENT
Black and Skaggs Associates, Inc.
Battle Creek, Michigan

Serving Michigan Physicians

Offices in these cities
Ann Arbor - Battle Creek - Berkley - Detroit - Flint
Grand Rapids - Lansing - Muskegon - Saginaw - Traverse City

Index to Advertisers

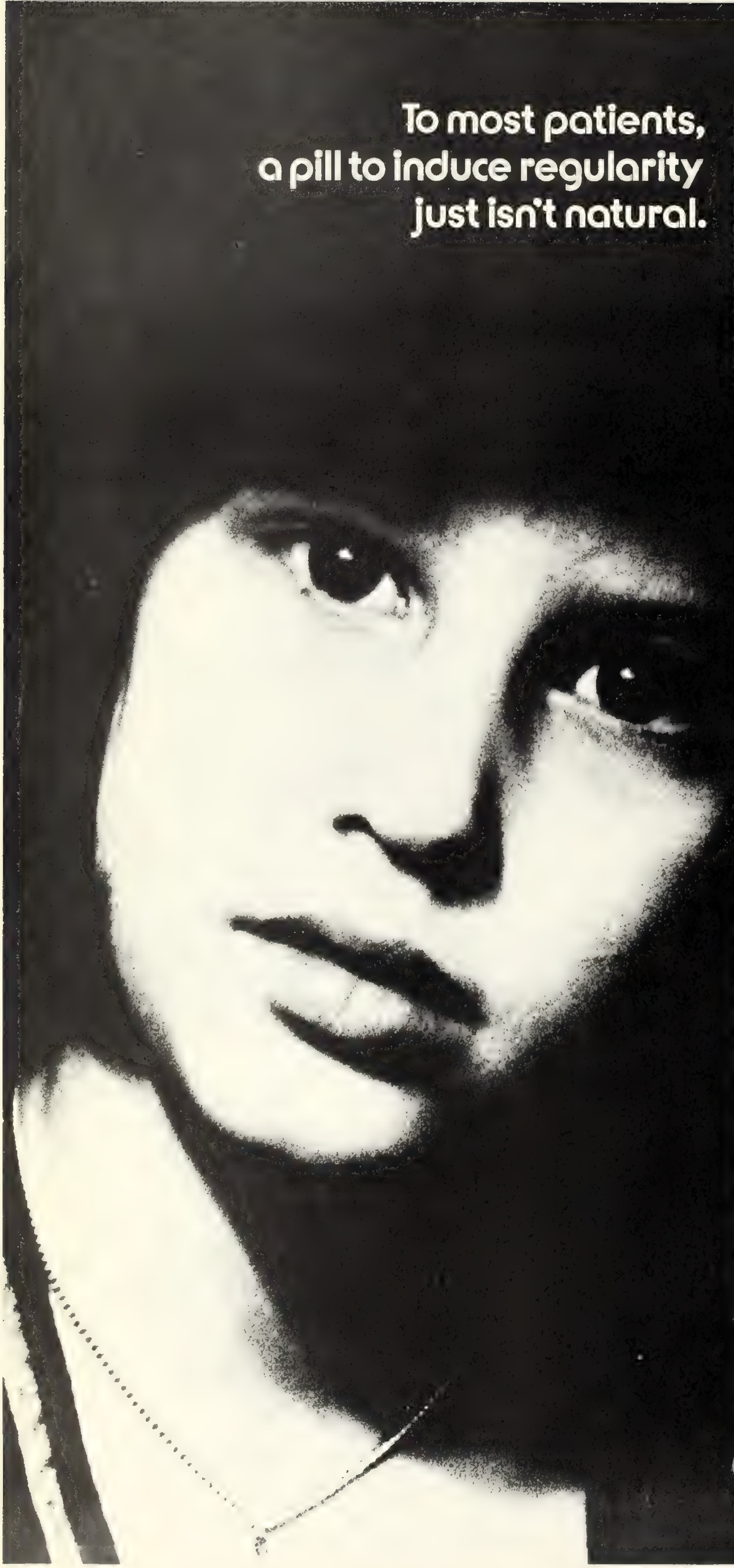
Arch Laboratories 83
Breon Laboratories 57
Brighton Hospital 31
Bristol Laboratories 6, 42-43, 74-75
Brown Pharmaceuticals 54
Burroughs-Wellcome & Co. 61
Campbell Soup Co. 33
Chicago Medical Society 54
Classified Advertising 82
Fisher Bldg., The 44
Fleet, C. B. Co. 77
Geigy Pharmaceuticals 4
Lilly, Eli and Co. 10
Mead Johnson Laboratories 66-67
Medical Protective Co. 78
Medicenter of America 81
Mediclinics 60
Mercywood Hospital 59
Michigan Medical Service 2
National Drug Co. 37-38, 69-70
Poythress, Wm. P. & Co. 48
Professional Management 83
Robins, A. H. Co. 46-47
Roche Laboratories ....1, 45, 58, 62-63-64, Cover II, Cover IV
Searle, G. D. & Co. 34-35
Shedd-Bartush Foods (Beatrice Foods) 84
Stratton, Ben P. Agency ....Cover III
Stuart Pharmaceuticals 36, 72-73
Upjohn Co. 71
Walker Corp. & Co. 40, 41
Wolverine Coin-Op Sales Co. 80

Con-
ven-
ience!

Dicarbosil®
ANTACID

Your ulcer patients and others will praise it. Specify DICARBOSIL 144's—144 tablets in 12 rolls.

ARCH LABORATORIES
319 South Fourth Street, St. Louis, Missouri 63102



To most patients, a pill to induce regularity just isn't natural.

Prune juice often accomplishes the same end. With safety. It's *natural*, has no additives or habit forming risk. Shedd's would like to send you some complimentary physician's certificates for your patients, entitling them to a bottle of Shedd's Prune Juice. It's the one thing you can prescribe that's guaranteed to taste good.

Write:
Shedd-Bartush Foods, Inc.
Division of Beatrice Foods
14401 Dexter Blvd.
Detroit, Michigan 48238

Shedd's
Lady Betty
UNSWEETENED
PRUNE JUICE
QUART FL

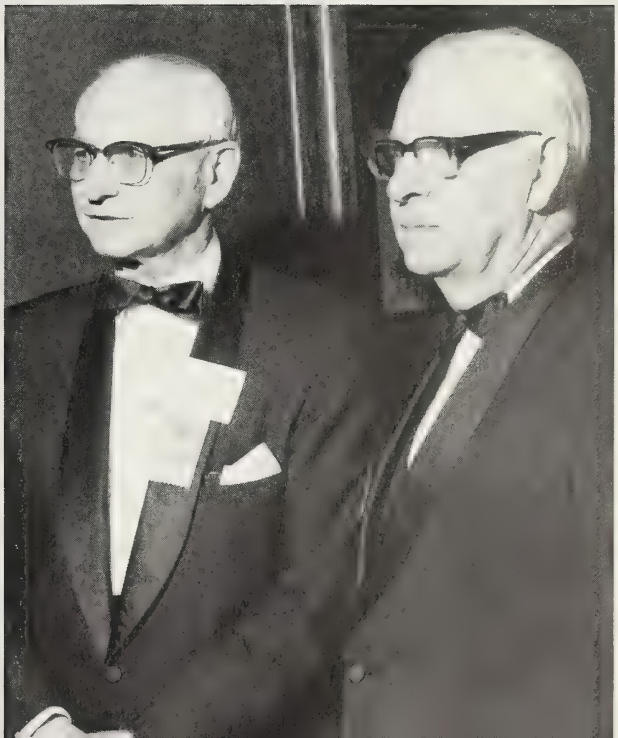
The first to act like a prune juice but taste like a drink.

Shedd's

Scenes Of 1970 Past Presidents' Reception

THE PRESENCE of the physicians' wives lends a gracious and pleasant atmosphere to the annual past presidents' reception. At the 1970 event, George W. Slagle, M.D., left, Battle Creek, past MSMS president, and Mrs. Slagle talked with MSMS Director Warren F. Tryloff, second from right, and another MSMS Past President, O. J. Johnson, M.D., Bay City, right.

PAST SPEAKERS of the MSMS House of Delegates are guests at the past presidents' reception. Two of them, John S. De Tar, M.D., center, and Oscar D. Stryker, M.D., Mt. Clemens, right, enjoy the reception with Kenneth Johnson, M.D., Lansing, past MSMS president, a former speaker and now MSMS secretary.



THE 1970-71 MSMS PRESIDENT, Harold H. Hiscock, M.D., Flint, right, confers for a moment with MSMS Past President Luther R. Leader, M.D., Royal Oak. The occasion was the past presidents' reception at the 1970 MSMS Annual Session in Detroit, with many medical society dignitaries, past and present, in attendance.

South Pacific Awaits MSMS Members

MSMS members and their immediate families are invited to take part in a two-week South Pacific travel medical seminar and adventure departing from Detroit March 11, 1971.

The trip will include New Zealand, Australia and Tahiti.

For the cost of $998 per person complete, the trip includes direct flights via chartered 707 jet, first class hotels, complete American breakfasts, gourmet dinners, VIP preregistration at all hotels, escort and five hosts always available, optional sightseeing tours each day and no regimentation.

The South Pacific adventure was suggested by the MSMS Committee on Group Travel Plans and approved by The MSMS Council during October.

At right, a scene on the island of Bali Hai, which can be visited during the MSMS South Pacific trip.

Walter C. Bornemeier, MD, president of the AMA, at right in left picture, addressed members of the Kent County Medical Society recently, and met there with state and local medical leaders, among them James P. Muldoon, MD, president-elect of the Kent Society. On hand for the meeting, in picture at right, were Harold H. Hiscock, MD, right, MSMS president, and J. D. Miller, MD, Grand Rapids.

Progress Report: The Detroit Medical Center

(Three new buildings nearly completed.)

Rehabilitation Institute

WSU's Basic Science Building

Children's Hospital

Speakers at a recent meeting of the Capitol Chapter, Michigan Academy of General Practice, called to discuss "The New Family Physician," included, from left, Lee E. Feldkamp, M.D., Plymouth, MAGP past president; Willard Miller, M.D., Lansing, president-elect, MAGP Capitol Chapter; James F. Dooley, M.D., Flint, MAGP president: Harold Crow, M.D., Lansing, MAGP Capitol Chapter secretary-treasurer, and Louis R. Zako, M.D., Allen Park, vice speaker, MAGP House of Delegates.

Lansing-area Family Physicians draw large crowd

The large crowd attracted to the recent meeting of the Capitol Chapter, Michigan Academy of General Practice, included a contingent of medical students from Michigan State University's College of Human Medicine, who were special guests. President of the Capitol Chapter is Hugo Saenz, M.D., Lansing.

Members of the Medical Careers Club at Detroit's Kettering High School listen as Mrs. Carol Rau, R.N., describes instruments used in the emergency rooms at Hutzel Hospital. Robert Sellers, right, is club sponsor and science department head at Kettering. The students attending a hospital seminar, are among 2,000-3,000 belonging to medical career clubs in Detroit, many of them in the inner city.

Michigan Medicine
Breaking News: Deadline Dec. 29
January 1971, Volume 70, Number 1
Michigan State Medical Society

MSMS Governmental Department Underway; Legislature's Reorganization Nearly Complete

MSMS Department of Government Relations now is functioning within its reorganized structure with the assumption of duties of the new department manager. Bruce Ambrose, formerly Director of Public Information, Michigan Society for Mental Health, formally assumed the managership December 1. Departmental staff assignments remain the same, with Mrs. Sherry Hall in charge of the Medic-Corps Program, and Herbert Mehler in charge of government medical program review and liaison.

The Legislative Policy Committee, a reference committee of The Council, chaired by Robert C. Prophater, MD, Bay City, held its first meeting Dec. 9, devoting a major proportion of its time to discussion of functioning of the department. Legislative Policy Committee will serve The Council by recommending policy decisions relating to the MSMS legislative program, and will provide leadership to the Department of Government Relations on interpretations of Council policy between meetings of The Council.

Legal Affairs Committee, chaired by Kenneth H. Johnson, MD, Lansing, will provide the same service it has traditionally: That of screening legislative bills and making recommendations thereto, and of initiating recommendations for legislation which MSMS ought to seek and support. Legal Affairs Committee is composed of doctors of medicine who have been active on the committee in the past, plus members of MSMS Medic-Corps program.

* * *

Rep. William Ryan, Democrat from Detroit, will serve again as Speaker of the Michigan House of Repre-

(Continued on Page 92)

CAPSULES

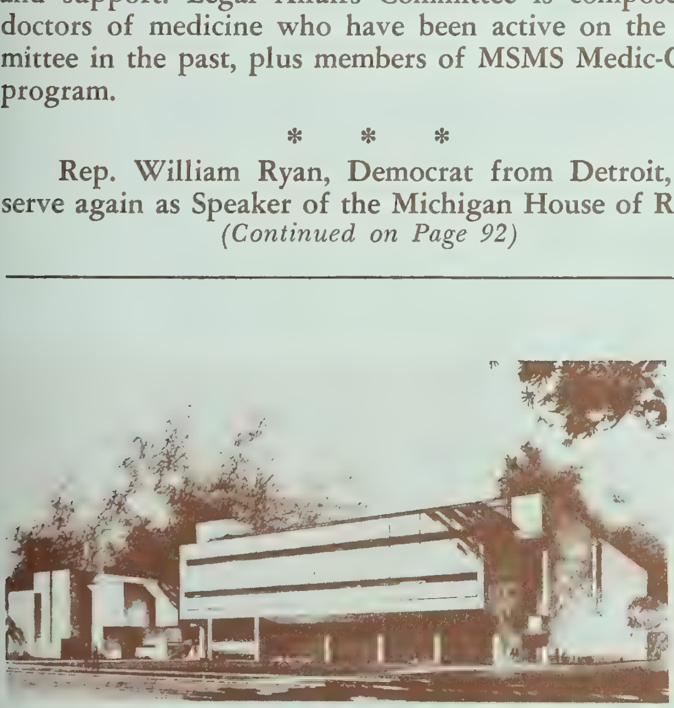
A workshop on drug abuse for the family physician is planned Jan. 31 at Kellogg Center, East Lansing, by the Michigan Academy of General Practice, in cooperation with the Governor's Office of Drug Abuse, and MSU. Enrollment is limited to 60 physicians on a first-come, first-serve basis and may be made through the Michigan Academy of General Practice, Continuing Education Service, Kellogg Center, MSU, East Lansing, 48823.

* * *

Stanley R. Nelson, formerly of Minneapolis, began duties Jan. 1 as executive director of Henry Ford Hospital, Detroit. Mr. Nelson succeeds Robin C. Buerki, MD, who has been associated with Henry Ford since 1950 as executive director and member of the board of trustees. Doctor Buerki will continue as a member of the board. Before joining the Detroit hospital, Mr. Nelson was president and chief executive officer of the Abbott-Northwestern Hospital Corporation of Minneapolis.

* * *

A three-day course in acute coronary care is planned Jan. 13-15 by the Michigan Heart Association in cooperation with the University of Michigan Medical Center. The



A WAYNE STATE UNIVERSITY medical building to be known as the Mott Center for Human Growth and Development will be built in the Detroit Medical Center with a $4.5 million gift from the Charles Stewart Mott Foundation of Flint, Michigan. The center will study medical problems that are related to social conditions. The $4.5 million grant is the largest gift ever made to Wayne State University by a non-governmental organization.

Doctor Gronvall

CAPSULES, cont.

meeting will be held in the Towsley Center for Continuing Medical Education at the U-M. Interested physicians may contact Oliver H. Wendt, the Michigan Heart Association, 13100 Puritan, Detroit, 48227. The course is approved for AAGP credit.

* * *

Members of the Michigan State Medical Assistants Society will take part in their 1971 Mid-Winter Educational Seminar Jan. 30-31 in Saginaw. Speakers will include Teck Lian, MD, who will discuss "The Many Faces of Drug Abuse," and William DeYoung, MD, whose topic will be forensic medicine. Both are of Saginaw.

* * *

A special Michigan State University committee is at work developing long range plans for use of the Michigan College of Osteopathic Medicine property in Pontiac. MSU Executive Vice President Jack Breslin is chairman. By the fall of 1972, the entire MSU program in osteopathic medicine will be on the main East Lansing campus, completing the move from the 164-acre Pontiac site.

* * *

The Woman's Auxiliary to MSMS is planning its fourth annual Legislative Day, March 23, at the Olds Plaza Hotel in Lansing. The all-day meeting will again include luncheon with the legislators, and a tour of the capitol building will be available.

Chairman of the meeting is Mrs. Eli Igna, Grosse Pointe,

Doctor Gronvall Appointed Dean Of U-M Medical School

Dr. John A. Gronvall, MD, is new dean of The University of Michigan Medical School and director of the Medical Center.

His appointment and approval by the U-M Regents were announced Dec. 18 by the U-M President Robben W. Fleming.

Dr. Gronvall, a former associate dean of the U-M Medical School, succeeds William N. Hubbard, Jr., MD, who left April 1, 1970, to become a vice president of the Upjohn Co. Dr. Gronvall has been acting dean and director since then.

His nomination and selection follow an intensive eight-month survey of candidates for the position by special search committee of the Medical Center faculty, students and representatives of the University.

A pathologist, Dr. Gronvall is 39.

MSMS Delegation Active At AMA Clinical Convention

Fourteen MSMS delegates and alternate delegates to the AMA have returned from an active session at the AMA Clinical Convention Nov. 29 - Dec. 2 in Boston. They were led by Donald N. Sweeny, Jr., MD, Detroit, chairman.

Doctor Sweeny reported at the Dec. 9 meeting of The MSMS Council that his delegation had presented six of its own resolutions to the AMA House; three were passed, two referred and one rejected.

"The activities of the Michigan delegation made the work of its chairman easy and pleasant," stated Doctor Sweeny. "Each delegate worked tirelessly at his assigned tasks; alternate delegates were active more than usual in presenting the position of the MSMS. We made many friends; the services of Warren Tryloff, MSMS director, and his staff of Herbert Auer and Richard Campau were very helpful in giving support to your delegation."

Michigan Health Council to Concentrate On Raising Number of Health Personnel

"Project 75" is the name of the major thrust of activity to be carried out during the next five years by the Michigan Health Council.

Approved by the Health Council at its annual meeting, "Project 75" calls for raising the ratios by 1975 of Michigan physicians and other health professionals and technologists, to patients.

A 75-member health manpower advisory council will be named to provide leadership throughout the state in recruiting students and expanding their educational opportunities in the allied health fields.

Michigan is approximately 25% below the national ratios of professionals to patients in medicine, nursing and many other health categories, according to John A. Doherty, MHC director.

Speakers Being Procured For Maternal Health Conference April 14-15

Speakers are being invited and plans furthered for the two-day 1971 Michigan Conference on Maternal and Perinatal Health April 14-15. New location for the meeting, which has previously been held in Flint, will be the Olds Plaza Hotel in Lansing.

Darrell E. Statzer, MD, Detroit, is again chairman of the conference, which annually attracts about 500 physicians, nurses, students and others interested in the welfare of mother and child.

Some MSMS Committees Have New Leaders in 1971

(The following is a list of new MSMS committee chairmen. The first group is appointed by President Harold H. Hiscock, MD, Flint, and the second by Council Chairman Ross V. Taylor, MD, Jackson. A complete list of committee chairmen will appear in the February issue of MICHIGAN MEDICINE.)

MSMS COMMITTEES

Advisory to Woman's Auxiliary—Francis P. Rhoades, MD, Detroit
Legal Affairs—Kenneth H. Johnson, MD, Lansing
Maternal and Perinatal Health—Richard T. Mellis, MD, Kalamazoo
Public Health—Louis R. Zako, MD, Allen Park
Public Relations—Thomas R. Berglund, MD, Kalamazoo

COUNCIL COMMITTEES

Awards—Robert J. Mason, MD, Birmingham
Education Liaison—Brock E. Brush, MD, Detroit
Legislative Policy—Robert C. Prophater, MD, Bay City
Finance—Ernest P. Griffin, Jr., MD, Flint
County Societies—Ralph R. Cooper, MD, Detroit
Publication—Robert M. Leitch, MD, Union City

CAPSULES, cont.

1971 legislative chairman for the auxiliary. Speakers are to include an AMA representative who will discuss national health insurance.

* * *

A five-day program on family practice will be offered Jan. 18-22 by The University of Michigan's department of postgraduate medicine. Senior Medical Center staff members will conduct sections of the course in internal medicine, pediatrics, obstetrics and gynecology, surgery and psychiatry.

The program is designed to give general practitioners the opportunity to review a number of topics commonly encountered in daily practice, and to assist those physicians who plan to take the February 1971 Family Practice Board Examinations.

Physicians interested in attending the course should contact the Department of Postgraduate Medicine, University of Michigan Medical Center, Towsley Center for Continuing Medical Education, Ann Arbor, Michigan, 48104.

Doctors,

did you see

Maternal Health Desk Reference Card No. 13, "The Low Birth Weight Infant," which appeared in the December issue of *Michigan Medicine*? The card is designed for insertion in your files as a handy reference. Be sure to save it.

Michigan Physicians Lead New AMA Sections

The first two councils to complete formation under the new AMA Section Council structure are both led by Michigan physicians. Heading the new Section on Anesthesiology is Paul R. Dumke, MD, Grosse Pointe, while E. Richard Harrell, MD, Ann Arbor, is chairman of the new Section on Dermatology.

The new organizational structure, established to provide medical specialty associations with a direct role in AMA policy-making decisions and section program development, will become effective Jan. 1, 1972.

MSMS Legislative Activity, cont.

(Concluded from Page 89)

sentatives. Majority Democrats caucused Dec. 17 and chose Rep. Ryan their candidate for Speaker. Rep. Marvin Stempien, Livonia, will succeed to Majority Floor Leader under his party's leadership. Rep. Stanley J. Davis, Grand Rapids, was named speaker pro tem, and Rep. Mathew McNeely, Detroit, associate speaker pro tem. Formal organization of the House of Representatives takes place in January.

Republican leaders for the new session will be Rep. Clifford Smart, Walled Lake. Rep. Thomas Ford, Grand Rapids, will be assistant minority leader; Rep. Roy Spencer, Attica, minority floor leader; Rep. Dennis Cawthorne, Manistee, assistant floor leader; Rep. James Heinz, Battle Creek, caucus chairman; Rep. James Damman, Troy, assistant caucus chairman; Rep. Bert Brennan, Saginaw, whip; and Rep. John Payant, Kingsford, assistant whip.

Democrats have yet to name their caucus chairman, floor leader and assistants.

Senate party organization was settled in mid-November, though formal organization of the Senate remains somewhat clouded by the 19-19 party split.

Senate Republicans re-elected Sen. Robert VanderLaan (Kentwood) Majority Leader, and named Sen. John Toepp (Cadillac) majority floor leader, Sen. Charles O. Zollar (Benton Harbor) caucus chairman; Sen.-elect Robert W. Davis (St. Ignace) majority whip; and Sen. Gilbert Bursley (Ann Arbor) assistant majority leader.

Democrats also re-elected their Senate leader: Sen. George S. Fitzgerald of Grosse Pointe Park. Other Democratic leadership includes Sen. Coleman Young (Detroit) floor leader; Sen. Michael J. O'Brien (Detroit) assistant minority leader; Sen. Stanley F. Rozycki (Detroit) assistant minority floor leader; Sen. John E. McCauley (Wyandotte) caucus chairman; Sen. Basil W. Brown (Highland Park) caucus vice chairman; Sen.-elect Daniel Cooper (Southfield) minority whip, and Sen. John T. Bowman (Roseville) Democrat nominee for associate president pro tem.

CAPSULES, cont.

Hutzel Hospital has created and filled three new executive posts as part of a continuing program to widen and increase the hospital's effectiveness in serving the Detroit medical community.

Robert E. Mack, MD, director and administrative head of the hospital, has been named president and chief executive officer, and a member of the board of trustees.

Frank P. Iacobell, former assistant director, was appointed vice president and director, and Robert P. Jarvis, controller, has been named assistant director.

* * *

Parke, Davis & Company and Pope Brace Company, of Kankakee, Ill., jointly announced today the acquisition by Parke-Davis of all the assets and business of Pope Brace for an undisclosed number of shares of Warner-Lambert Company common stock.

Parke-Davis became a wholly-owned subsidiary of Warner-Lambert last month following completion of the merger.

Pope Brace is a leading international supplier of more than 2,000 orthotic and prosthetic appliance parts and supplies.

Plan Now

for the 1971 Michigan Conference on Maternal and Perinatal Health April 14-15 in Lansing.

U. C. SAN FRANCISCO
MEDICAL CENTER LIBRARY

FEB 8 1971

Michigan Medicine

News Extra: Deadline, Jan. 13
January 1971, Volume 70, Number 2
Michigan State Medical Society

New State Board regulations shorten MD's preparation time

New regulations of the Board of Registration in Medicine are now in effect changing the internship or postgraduate training requirement for licensure of physicians in Michigan, consolidating the period of time required for medical school education and complying with the Basic Science Law amendment.

The changes went into effect Nov. 30, 1970, in accordance with the Administrative Procedures Act 306 of 1969.

Perhaps the most important change to the private practitioner in Michigan is the one bringing licensure requirements in line with the amendment in 1970 to the Basic Science Law. The amendment exempts graduates of accredited U. S. medical schools from taking the basic science examinations. Graduates of Canadian and foreign medical schools still must take the examination.

Another important change in the Board of Registration in Medicine's requirements is the one allowing a physician to go directly into a residency upon graduation from medical school.

Approximately nine specialty boards no longer require a year of internship, according to John M. Wellman, MD, executive secretary of the state board.

"It makes no difference to the State Board whether a physician has taken one year of internship or residency when he applies to take his examination for licensure," says Doctor Wellman.

The new writing of the Board of Registration's regulations also allows a medical student to complete his medical school study in 32 consecutive months of continuous instruction.

Thus, a potential practitioner may take just five years to reach the stage of residency or internship training: two years of pre-medical school, plus three years of medical school training, for a total of five years.

Changes have also been effected in the requirements for admission to medical schools, shortening the number of hours required in chemistry, physics and biology and dropping the foreign language requirement.

The changes in the regulations, according to Doctor Wellman, will help ease the shortage of physicians in Michigan by allowing physicians to be trained in a shorter period of time, thus producing MDs at a faster rate.

CAPSULES

Two major changes in the administration of regional Comprehensive Health Planning offices have taken place recently.

The Upper Peninsula Areawide Comprehensive Health Planning Association, with headquarters in Marquette, is headed by Gordon Labuhn, who was formerly director for the Upper Peninsula Region of the Michigan TB and Respiratory Disease Association. Mrs. Frances Lamb had been serving the UP office as acting director since it was funded in June.

The South Central Michigan Comprehensive Health Planning Association, with main office in Battle Creek, also has a new director. He is Robert Azar, who succeeds Paul Nelson. Mr. Nelson is now administrator of Emma Bixby Hospital in Adrian, where Mr. Azar had formerly been an assistant administrator.

* * *

Harold L. Wright, Jr., MD, is serving as acting director of the Hawthorn Center near Northville. Doctor Wright, Hawthorn's senior clinical psychiatrist and pediatrician, succeeds Ralph D. Rabinovitch, MD, who has served as direc-

The annual Michigan State Medical Society **Directory of Members** will be mailed to all MSMS members later this month.

Be sure to watch for the directory and save it for handy reference. Additional copies will not be available.

tor of the center since its opening in 1956. Doctor Rabinovitch will continue as clinical research director for the center.

* * *

A conference on Nuclear Medicine in Clinical Practice is planned Feb. 13 at Edward W. Sparrow Hospital, Lansing. The conference will be sponsored by the hospital, by Nuclear-Chicago, the Michigan Association for Regional Medical Programs, the MSU College of Human Medicine and the Ingham County Medical Society.

Speakers will include physicians from North Carolina, Ohio and Indiana. Credit will be granted by the AAGP. Further information may be obtained from Richard W. Pomeroy, MD, Director of Medical Education, Sparrow Hospital, 1215 E. Michigan Ave., Lansing, 48902.

* * *

Members of the Michigan State Medical Assistants Society were appointed and elected to national posts at the recent annual convention of the American Association of Medical Assistants in Des Moines.

Mrs. Betty Lou Willey, CMA, Port Huron, was reelected speaker of the AAMA House of Delegates, while Miss Marlouise Redman, Detroit, was elected vice speaker of the AAMA House of Delegates.

Mrs. Patricia Austin, Ann Arbor, president of the MSMAS, was appointed chairman of the AAMA Insurance Committee. Other Michigan members appointed to committees were Mrs. Claire E. Van Dam, Berrien County, Education Committee; Pauline Moore, Research and Development Committee, and Margaret Broadwell, Legislation Committee.

Mrs. Willey received an outstanding service award for her contributions as speaker of the house, and Michigan received two trophies for membership increases.

Governor signs into law Blue Shield-Chiropractic Bill

Hours before the deadline for action Dec. 31, Governor Milliken signed into law Senate Bill 1756, which includes practitioners of chiropractic in Blue Shield benefits. The new law has immediate effect.

The measure inserts into the enabling act for nonprofit medical care corporations (Blue Shield) the term "doctors of chiropractic," and provides for office, hospital and home care.

The bill was introduced in the Senate June 1 by Senators Charles Youngblood (D-Detroit), Harry DeMaso (R-Battle Creek), John Bowman (D-Roseville), L. Harvey Lodge (R-Waterford), Michael O'Brien (D-Detroit), N. Lorraine Beebe (R-Dearborn) and George Fitzgerald (D-Grosse Pointe Park). Twelve days later it was reported favorably from the Senate Commerce Committee, and on June 24 the Senate passed the bill 30-5.

In the House of Representatives the bill was stalled in Insurance Committee until Nov. 11, when it was reported favorable, and on Dec. 9 the House passed the bill, 74-15.

Urging a veto, MSMS advised the Governor on merits of chiropractic, raising the questions of adequacy of education and appropriateness of treatment. Others who urged a veto included Blue Shield, the Department of Public Health and Comprehensive Health Planning. Arguments for the bill pointed out that Medicaid and private health insurance companies provide coverage for chiropractic treatment.

Similar legislation was enacted in Ohio last year. Like legislation was rejected in Pennsylvania, and vetoed by the Governor of New Jersey.

AMA councils and committees include many Michigan MDs

Fourteen Michigan physicians have been reappointed to American Medical Association councils and committees, to serve one year. The physicians and their appointments follow:

Otto K. Engelke, MD, Ann Arbor—Council on Environmental and Public Health

Harold F. Falls, MD, Ann Arbor—Council on Health Manpower

Starling D. Steiner, MD, Detroit—Council on Occupational Health

Herbert A. Raskin, MD, Southfield, and Maurice H. Seevers, MD, Ann Arbor—Committee on Alcoholism and Drug Dependence (Doctor Raskin serves as chairman)

Bertram D. Dinman, MD, Ann Arbor—Committee on Occupational Toxicology

Donald N. Sweeny, Jr., MD, Detroit—Disability Insurance Claims Review Committee

William W. Jack, MD, Grand Rapids—Committee on Maternal and Child Care (not yet approved by AMA Board)

Richard C. Schneider, MD, Ann Arbor—Committee on Medical Aspects of Sports

Clarence Livingood, MD, Detroit—Interspecialty Committee, American Academy of Dermatology

Harold F. Falls, MD, Ann Arbor, Interspecialty Committee, American Academy of Ophthalmology and Otolaryngology

Norman D. Nigro, MD, Detroit, and James A. Ferguson, MD, Grand Rapids—Interspecialty Committee—American Proctologic Society

Alexander H. Hirschfeld, MD, Detroit—Joint Committee on Mental Health in Industry

Special WCMS committee studying many aspects of drug abuse

The Wayne County Medical Society's Ad Hoc Committee on Drug Addiction had its first meeting Jan. 7, charged with the task of studying "all aspects of this difficult problem of drug addiction—treatment, rehabilitation, education and research."

Robert K. Whiteley, MD, WCMS president, designated the committee's duties, after the medical society adopted a policy statement recognizing that drug addiction is a health, as well as a legal and socio-economic, problem.

Ad hoc committee chairman Frank B. Walker, MD, Detroit, plans to follow the medical society's recommendation that all concerned governmental and health agencies be invited to participate.

The medical society has also approved in principle a joint educational program for Detroit's junior high students proposed by the Detroit Bar Association, to be coordinated with an ongoing project of the Detroit Jaycees.

Doctor Walker also expects his committee to become involved in drawing up some ethical and moral guidelines for the treatment of addicts by private physicians.

CAPSULES/continued

William J. Stapleton, Jr., MD, Detroit, MSMS's official historian, was 94 years old on Christmas Day. Doctor Stapleton was born Dec. 25, 1876, and has been a life-long resident of Detroit. He is the only surviving member of the first four-year class of the old Michigan College of Medicine, and was graduated in 1900.

Doctor Stapleton is past president of the Detroit Academy of Medicine, the Wayne County Medical Society and the Metropolitan Health Committee. In 1953 MSMS selected him Michigan's Foremost Family Physician. Since 1931, he has read and reviewed annually "One Hundred Books for the Doctor" for the Detroit *Medical News*. In addition, he is author of the official history of medicine in Michigan.

* * *

A three-part program is planned for the 1971 Scientific Sessions of the Michigan Heart Association April 29-May 1 at Cobo Hall in Detroit. All parts are designed to be of interest and value to general practitioners, internists and clinicians with large and busy practices.

The sessions will open Thursday, April 29, with a day-long program on stroke. The theme of the Friday morning program will be The Failing Myocardium and the Friday afternoon program, Treating the Failing Myocardium.

Available from MSMS upon your request

The following materials are available . . . we suggest you cut this coupon portion of this page out and send it to MSMS in an envelope. Your name and address is on the back of this coupon already so we can easily return the materials to you.

________ **MSMS Maternal Health Desk Reference Card #11 about Diabetes and Pregnancy and Card 13 about Low Birth Weight of Infants.**

________ **Informational folder about "What They Say about Chiropractic"**

________ **Informational folder about the "AMA Volunteer Physicians for Viet Nam Program"**

Mark your
calendar
now!

**1971
Michigan
Conference
on
Maternal
and
Perinatal
Health**

**April 14-15, 1971
Olds Plaza Hotel
Lansing**

Fifteen physicians appointed to new Blue Shield corporate body

The new Michigan Medical Service corporate body held its organizational meeting on Jan. 13, as this issue of *Michigan Medicine* was on the presses. Details about the meeting will appear in the February journal.

Michigan Blue Shield has appointed 15 doctors to serve on the corporate body in accordance with the revised Articles of Incorporation. Those appointed were Eugene Freitas, MD, Detroit; Roy J. Gerard, MD, Saginaw; William Gladstone, Jr., MD, Norway; Stuart Gould, MD, Ann Arbor; Robert H. Hamburg, MD, Detroit; Homer A. Howes, MD, Detroit; Benjamin Jeffries, MD, Harper Woods; William B. Jensen, Jr., MD, Grand Rapids; Paul Lahti, MD, Royal Oak; A. John Neerken, MD, Kalamazoo; George L. Reno, MD, Detroit; Charles Rogers, MD, Bay City; Richard E. Wunsch, MD, Traverse City; and Walter J. Zimmerman, MD, Royal Oak, all members of the outgoing board of directors, and William O. Mays, MD, Detroit, who has been supported by the Detroit Medical Society.

Michigan Blue Shield also sent invitations to the MSMS President, President-Elect, and 19 MSMS Councilors asking each to serve on the corporate body as "individual physicians." The MSMS House of Delegates, in special session December 16, had instructed the 21 members of The MSMS Council not to serve as ex-officio members of the Shield corporate body, merely because of their Council membership. (When this article was written January 8 it was not known which of the 21 Council members would agree to serve as individual physicians on the corporate body.)

The MD members of the corporate body on Jan. 13 were to select 12 MDs to serve on the new Blue Shield Board of Directors of 36 members. At least six members of the former Shield Board had to be returned to the new Board in compliance with the revised Articles of Incorporation.

**Second Class Postage Paid at East Lansing, Mich.
and at additional mailing offices.**

Michigan Medicine

MICHIGAN STATE MEDICAL SOCIETY

Published semi-monthly, Trimonthly in December and January, 26 issues, by the Michigan State Medical Society as its official journal. Second class postage paid at East Lansing, Mich. and at additional mailing offices. Yearly subscription rate, $9.00. Printed in USA. All communications should be addressed to the Publications Committee, Michigan State Medical Society, 120 West Saginaw Street, East Lansing, Michigan 48823. © 1971 Michigan State Medical Society. Phone: Area Code 517, 337-1351.

UNIVERSITY OF CAL
LIBRARY SCH OF MED
THIRD & PARNASSUS AVE
SAN FRANCISCO CAL 94122

Attention Librarians: This publication is a regular issue of MICHIGAN MEDICINE and should be saved for binding later with the larger scientific issues of the journal.

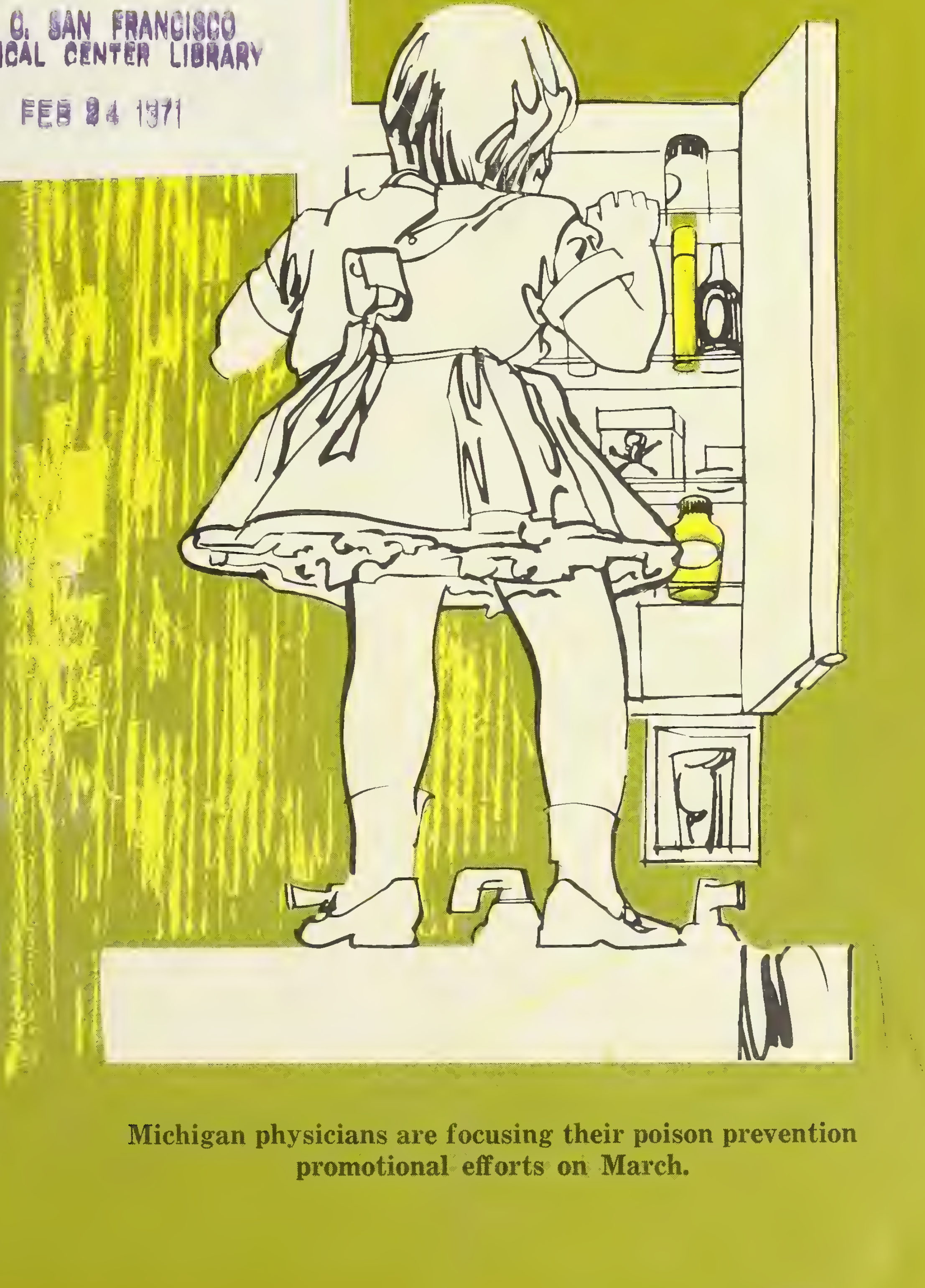
INSIDE:

Michigan physicians rate postgraduate courses

Doctor Taylor discusses MSMS and Blue Shield

Michigan Medicine

U. C. SAN FRANCISCO
MEDICAL CENTER LIBRARY
FEB 24 1971



Michigan physicians are focusing their poison prevention promotional efforts on March.

Menrium® treats the menopausal symptoms that bother him most.

Roche
LABORATORIES
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

His wife has a lot of different nenopausal symptoms, but only a few eally irritate *him*. Her hot flashes, her ertigo, her palpitations—that's *her* roblem. What really bothers him is er nervousness, her irritability and er excessive anxiety, often expressed y endless "book-shuffling, chain-moking, reading-lamp" insomnia!

Menrium takes care of hot flashes, ertigo, palpitations in most nenopausal women. Menrium rovides the well-known antianxiety ction of chlordiazepoxide (Librium®) nd water-soluble esterified estrogens. t therefore relieves more symptoms han either component separately. t takes care of the vasomotor ymptoms as well as the emotional ymptoms. This means the symptoms hat bother his wife most. And the ymptoms that irritate him most.

So, to help them both get through *er* menopause, remember Menrium.

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Management of manifestations generally associated with the menopausal syndrome—anxiety and tension, vasomotor complaints and hormonal deficiency states.

Contraindications: Women with cancer of breast or genitalia, except inoperable cases, and those with known hypersensitivity to chlordiazepoxide and/or esterified estrogens.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. As with all CNS-acting drugs, caution patients against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Exclude other possible causes of menopausal syndrome manifestations, such as pregnancy. Though physical and psychological dependence have rarely been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions) similar to those seen with barbiturates have been reported following discontinuance of chlordiazepoxide HCl. Potential benefits of use in pregnancy, lactation or women of childbearing age should be weighed against possible hazards to mother and child. Clinical data inadequate on safety in pregnancy.

Precautions: In elderly and debilitated patients, limit dosage to smallest effective amount of chlordiazepoxide (initially 10 mg or less per day) to preclude ataxia or oversedation; increase gradually as needed and tolerated. Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects—particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in patients with impaired renal or hepatic function. Paradoxical reactions to chlordiazepoxide (*e.g.*, excitement, stimulation and acute rage) have been reported in psychiatric patients. Employ usual precautions in the treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation very rarely reported in patients receiving Librium® (chlordiazepoxide) and oral anticoagulants.

Adverse Reactions: Untoward effects seen with either compound alone may occur with Menrium. With chlordiazepoxide, drowsiness, ataxia and confusion reported in some patients, particularly in the elderly and debilitated; while usually avoided by proper dosage adjustment, these are occasionally observed at lower dosage ranges. Also reported have been a few instances of syncope; isolated occurrences of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido, and occasional reports of blood dyscrasias, including agranulocytosis, jaundice and hepatic dysfunction. Periodic blood counts and liver function tests advisable during protracted treatment. Changes in EEG patterns (low-voltage fast activity) observed during and after chlordiazepoxide treatment.

With estrogens, headache, nausea and vomiting, anorexia, gastrointestinal discomfort, dysuria and urinary frequency, jitteriness, breast engorgement, formation of breast cysts, skin rashes and pruritus occasionally seen. Administration may also be associated with uterine bleeding and/or followed by withdrawal bleeding.

Usual Dosage: One tablet t.i.d. for 21 days, followed by one-week rest periods.

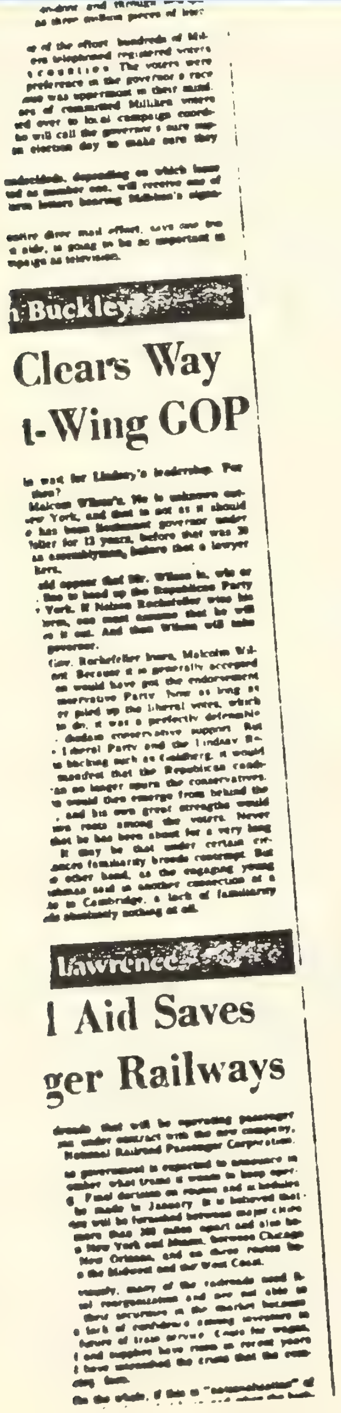
Menrium® T.I.D.

5 mg chlordiazepoxide	5-2	**0.2 mg water-soluble esterified estrogens**
5 mg chlordiazepoxide	5-4	**0.4 mg water-soluble esterified estrogens**
10 mg chlordiazepoxide	10-4	**0.4 mg water-soluble esterified estrogens**

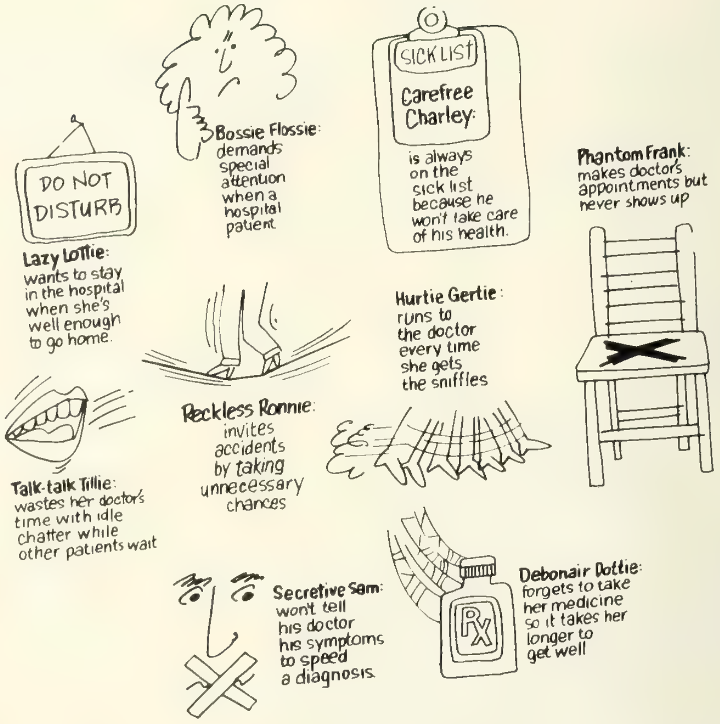
Dear Doctor:

Here is another in the series of advertisements we've been publishing in Michigan newspapers to point out ways all of us, including patients, can help keep health care costs down. No doubt you know some people like these we've described. It's our hope that at least some of them will see themselves and get the message.

MICHIGAN BLUE SHIELD


Buckley
Clears Way
t-Wing GOP
Lawrence
l Aid Saves
ger Railways

Do you know these people?


Lazy Lottie: wants to stay in the hospital when she's well enough to go home.
DO NOT DISTURB
Bossie Flossie: demands special attention when a hospital patient
SICK LIST
Carefree Charley: is always on the sick list because he won't take care of his health.
Phantom Frank: makes doctor's appointments but never shows up
Hurtie Gertie: runs to the doctor every time she gets the sniffles
Reckless Ronnie: invites accidents by taking unnecessary chances
Talk-talk Tillie: wastes her doctor's time with idle chatter while other patients wait
Secretive Sam: won't tell his doctor his symptoms to speed a diagnosis.
RX
Debonair Dottie: forgets to take her medicine so it takes her longer to get well

Recognize anyone you know from the descriptions above? People like these can contribute materially to higher cost of health care for us all. How? Because thoughtless habits and inconsiderate requests can waste a doctor's time and a hospital's facilities. And waste in health care — as in everything else — adds to the total cost.

At Blue Cross and Blue Shield we're actively involved in many measures designed to help slow down the rising cost of health care. One way is by checking DSR's (Doctors' Service Reports) to make sure that procedures and costs are in line with modern medical practices. Another is to examine in-hospital costs, laboratory expenses and drug charges to make sure they are consistent and fair.

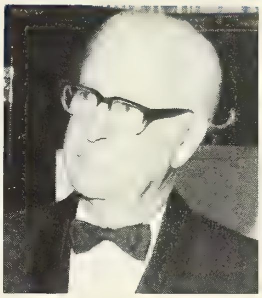
The cost of health care, of course, determines what you pay for Blue Cross and Blue Shield protection. All of us — hospital, doctor, patient, Blue Cross and Blue Shield — can make a contribution to stabilizing and reducing the cost of health care. We pledge to do our part. Will you help?

Pick up your free copy of "Your Health, Your Doctor and Your Pocketbook" at any Michigan Blue Cross and Blue Shield office. Copies are also available from most participating doctors and hospitals.

Help us help you

MICHIGAN BLUE CROSS AND BLUE SHIELD

President's Page



H. H. Hiscock, M.D.
MSMS President

Blue Shield and MSMS

(The following article was written by Ross V. Taylor, MD, Jackson, chairman of The MSMS Council, at the request of Harold H. Hiscock, MD, Flint, MSMS president.)

The Michigan State Medical Society in a special session Dec. 16, 1970, voted not to elect representatives to the restructured corporate body of Michigan Medical Service. The MSMS House of Delegates at that meeting also voted that the officers of MSMS not serve in the corporate body of MMS as "ex officio" members. Despite the poor weather, 82 voting members were present and the attendance would undoubtedly have been larger if some counties had used their alternate delegates when seated delegates were unable to attend.

In a capsule review of the September session, one must note that the MSMS House of Delegates in chronological order, first voted down resolutions which called for complete separation of the state society from Blue Shield, and secondly, voted not to approve the then proposed restructuring of the MMS corporate body and its board of directors. Later the MMS corporate body, which included all members of the MSMS House of Delegates, plus MMS administration and lay members of the board of directors, voted to approve the proposed restructuring of the Blue Shield corporate body and its board of directors. Every member should know that the action taken by the Blue Shield corporate body is in no way an official action binding the MSMS. A review of the recorded votes cast, in the separate organizations, leads to the conclusion that some of the members of the MSMS House of Delegates abstained from voting in the House but did vote in the corporate meeting and, also, some delegates (not necessarily a large number numerically) changed their votes when voting as delegates and later as corporate representatives.

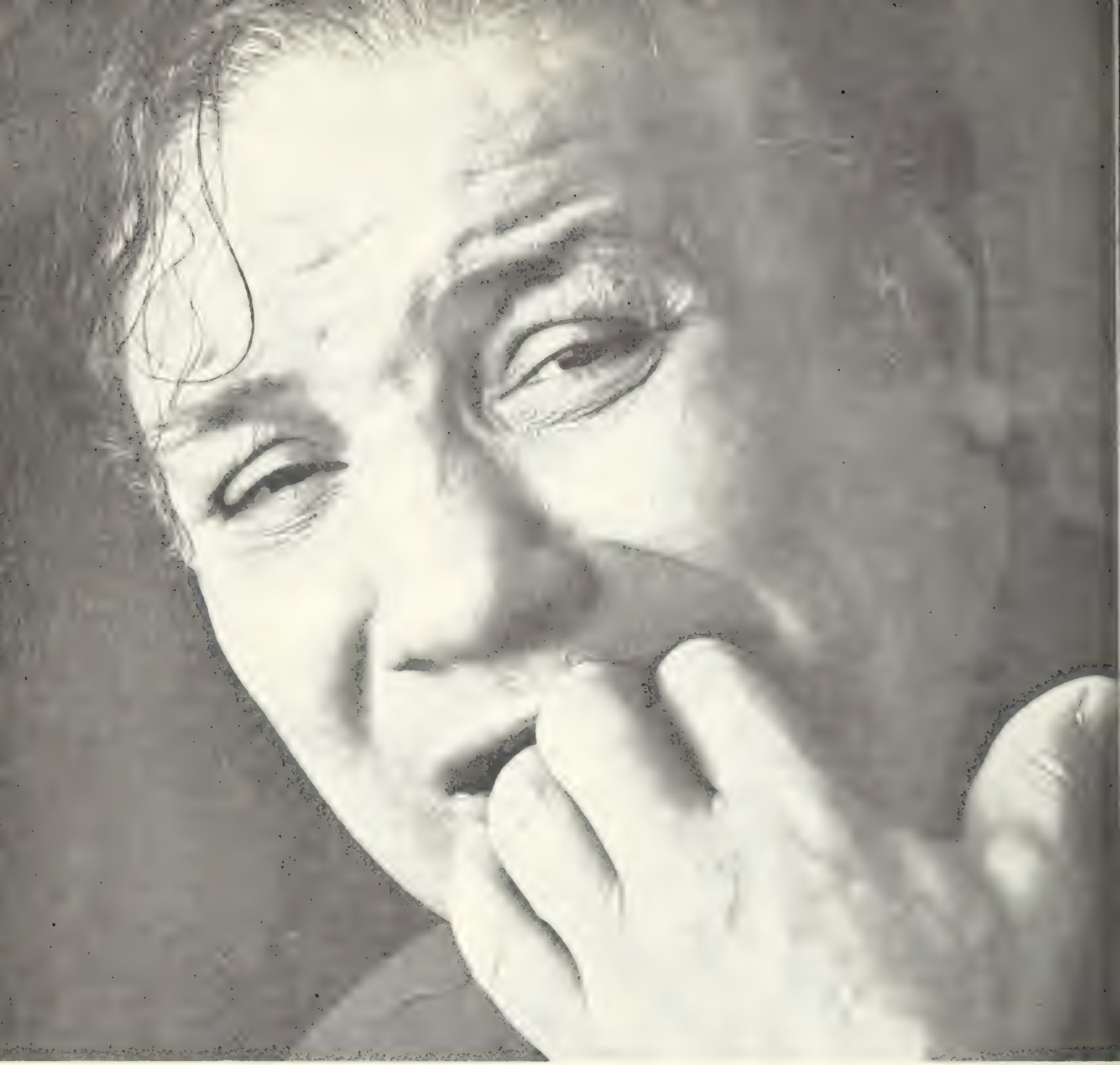
After the MMS corporate body approved the proposed restructuring plan, it was immediately submitted to the insurance commissioner (who had prior knowledge of the proposal) and he immediately approved the plan and in a directive dated Oct. 2, 1970, ordered that the restructuring of the MMS corporate body and its board of directors be completed within 120 days.

It is apparent that a majority of the delegates at the MSMS special session was of the opinion that Blue Shield was no longer "the doctors' plan" and that there was therefore to be no official representation of the MSMS in the new organizational setup. While the House directed that officers not serve Blue Shield in an "ex officio" capacity it was clearly stated that the officers and councilors could, if requested, serve at their own discretion as individual physician providers of professional service. In short, Blue Shield, with a minority physician membership, must recognize that the MSMS is no longer officially represented on its board of directors or in its corporate body. There must and will be continuing liaison between Blue Shield and the MSMS but the House of Delegates has unquestionably indicated that the future actions and activities of Blue Shield will be carefully watched and evaluated by the MSMS.

Only physicians can render professional services. If there is not support by a majority of physicians of the policies of MMS, then Blue Shield will not be in a position to fulfill their service contracts for a majority of their subscribers.

The estrangement between Michigan Blue Shield and the physicians of Michigan has gradually been increasing in the past decade or longer. The M-75

(Continued on Page 106)



DU-7019

Who's afraid of the big bad enema?

We all are. But Dulcolax is the cure for enemaphobia It can do almost anything an enema can — except look scary.

Just one suppository usually assures a predictable bowel movement in 15 minutes to an hour. Gone are the tubing, the "accidents", and the bruised egos associated with enemas

For preoperative preparation, the combination of tablets at night and a suppository the next morning usually cleans the bowel thoroughly. Suppositories may also be particularly helpful when straining should be avoided as in postoperative care.

As with any laxative, abdominal cramps are occasionally noted. The drug is contraindicated in the acute surgical abdomen

Dulcolax®...it's predictable
bisacodyl

Geigy GEIGY PHARMACEUTICALS, DIVISION OF GEIGY CHEMICAL CORPORATION, ARDSLEY, NEW YORK 10502 • UNDER LICENSE FROM BOEHRINGER INGELHEIM

Michigan Medicine

IN THIS ISSUE

SCIENTIFIC ARTICLES

111 The Michigan physician: His use and evaluation of the professional meeting and pg course; John N. Kotre, PhD; Floyd C. Mann, PhD; Neal A. Vanselow, MD
119 Which thyroid hormone preparation is best? Joel I. Hamburger, MD; Donald A. Meier, MD
121 Prosthetic replacement of the aortic valve: A current assessment of operative results; Andrew G. Morrow, MD

SPECIAL ARTICLES

127 How far should the federal government go to guarantee health care for all people? C. T. Hardwick, PhD
139 New Section of Solid Waste Management in operation in state health department; Maurice S. Reizen, MD
140 Doctor Sweeny details AMA actions on Michigan proposals
159 Medical Assistance in Michigan explained

PHOTO SECTION ON PAGES 171-174

OTHER FEATURES

99 President's page
103 MSMS leadership
108 New Members
118 Drug therapy problems
Monthly surveillance report
123 Perinatal tips
125 Viewpoints
133 Your opinion please
137 County societies
138 MSMS news
Michigan Mediscene
146 Medical care programs
150 About doctors
152 Council minutes
166 In memoriam
177 Breaking News

MICHIGAN MEDICINE is the official organ of the Michigan State Medical Society, published under the direction of the Publication Committee. Published Semi-Monthly, Trimonthly in January and December; 26 issues, by the Michigan State Medical Society as its official journal. Second class postage paid at East Lansing, Mich. and at additional mailing offices. Yearly subscription rate, $9.00; single copies, 80 cents. Additional postage: Canada, $1.00 per year; Pan-American Union, $2.50 per year; Foreign, $2.50 per year. Printed in USA. All communications relative to manuscripts, advertising, news, exchanges, etc., should be addressed to Judith Marr, Michigan State Medical Society, 120 West Saginaw Street, East Lansing, Michigan 48823. Phone Area Code 517, 337-1351. © 1971 Michigan State Medical Society.

SCIENTIFIC EDITOR
John W. Moses, MD

EXECUTIVE EDITOR
Herbert A. Auer

MANAGING EDITOR
Judith Marr

PUBLICATION COMMITTEE
Robert M. Leitch, MD
Union City
Chairman

Donato F. Sarapo, MD
Adrian

Edward J. Tallant, MD
Detroit

INFORMATION FOR CONTRIBUTORS

1. Address scientific manuscripts to the Publication Committee, Michigan State Medical Society, 120 West Saginaw Street, East Lansing, Michigan 48823. Submit original, double-spaced typewritten copy and two carbon copies or photo copies on letter size (8½ x 11 inch) paper. On page one, include title, authors, degrees, academic titles, and any institutional or other credits.

2. Authors are responsible for all statements, methods, and conclusions. These may or may not be in harmony with the views of the Editorial Staff. It is hoped that authors may have as wide a latitude as space available and general policy will permit. The Publication Committee expressly reserves the right to alter or reject any manuscript, or any contribution, whether solicited or not.

3. Illustrations should be submitted in the form of glossy prints or original sketches from which reproductions will be made by **Michigan Medicine.**

4. Articles should ordinarily be less than four printed pages in length (3000 words).

5. References should conform to *Cumulative Index Medicus,* including, in order: Author, title, journal, volume number, page, and year. Book references should include editors, edition, publisher, and place of publication, as well.

6. The editors welcome, and will consider for publication, letters containing information of interest to Michigan physicians, or presenting constructive comment on current controversial issues. New items and notes are welcome.

7. It is understood that material is submitted for exclusive publication in **Michigan Medicine.**

WHEN TRAUMA
RESULTS IN PAIN...

This photograph in no way implies an endorsement of Norgesic by Jerry Quarry

Norgesic . . . provides effective analgesia and relief of associated muscle spasm

Contraindications: Because of the mild anticholinergic effect of orphenadrine, Norgesic should not be used in patients with glaucoma, pyloric or duodenal obstruction, achalasia, prostatic hypertrophy or obstructions at the bladder neck. Norgesic is also contraindicated in patients with myasthenia gravis and in patients known to be sensitive to aspirin, phenacetin or caffeine.

Since mental confusion, anxiety and tremors have been reported in patients receiving orphenadrine and propoxyphene concurrently, it is recommended that Norgesic not be given in combination with propoxyphene (Darvon®).

Warnings: USE IN PREGNANCY: Since safety of the use of this preparation in pregnancy, during lactation, or in the child-bearing age has not been established, use of the drug in such patients requires that the potential benefits of the drug be weighed against its possible hazard to the mother and child.

USE IN CHILDREN: The safe and effective use of this drug in children has not been established; therefore, the physician must weigh the benefits against the potential hazards.

Precautions: It has been reported that prolonged or excessive use of phenacetin may result in nephrotoxicity. Caution, therefore, should be exercised when Norgesic is administered to patients with renal disorders. It should also be used with caution in patients with tachycardia.

Adverse Reactions: Side effects of Norgesic are those seen with APC or those usually associated with mild anticholinergic agents. These may include tachycardia, palpitation, urinary hesitancy or retention, dry mouth, blurred vision, dilatation of the pupil, increased intraocular tension, weakness, nausea, vomiting, headache, dizziness, constipation, drowsiness, and rarely, urticaria and other dermatoses. Infrequently an elderly patient may experience some degree of confusion. Mild central excitation and occasional hallucinations may be observed. These mild side effects can usually be eliminated by reduction in dosage. One case of aplastic anemia associated with the use of Norgesic has been reported. No causal relationship has been established.

Dosage and Administration: Adults—1 to 2 tablets 3 to 4 times daily.

Riker Laboratories, Inc.
NORTHRIDGE, CALIFORNIA 91324

NORGESIC®
(orphenadrine citrate, 25 mg., aspirin, 225 mg., phenacetin, 160 mg., caffeine, 30 mg.)

the versatile analgesic

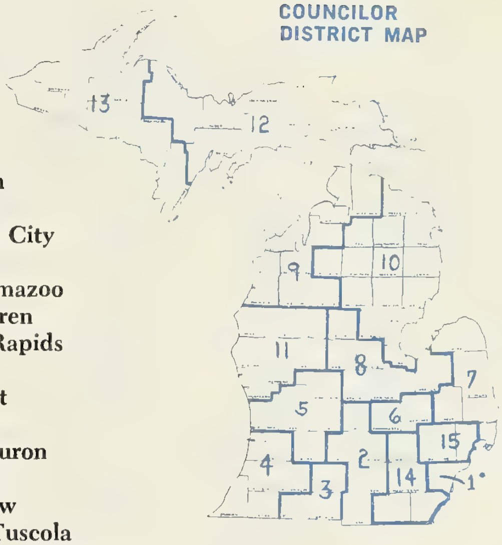
MSMS Leadership

PRESIDENT	Harold H. Hiscock, MD	Flint
PRESIDENT-ELECT	Sidney Adler, MD	Detroit
SECRETARY	Kenneth H. Johnson, MD	Lansing
ASST. SECRETARY	Brooker L. Masters, MD	Fremont
TREASURER	John R. Ylvisaker, MD	Pontiac
ASST. TREASURER	C. Allen Payne, MD	Grand Rapids
SPEAKER	Vernon V. Bass, MD	Saginaw
VICE-SPEAKER	James D. Fryfogle, MD	Detroit
PAST PRESIDENT	Robert J. Mason, MD	Birmingham
COUNCIL CHAIRMAN	Ross V. Taylor, MD	Jackson
VICE-CHAIRMAN	Brooker L. Masters, MD	Fremont

DIRECTOR
Warren F. Tryloff .... East Lansing
GENERAL COUNSEL
Lester P. Dodd .... Detroit
LEGAL COUNSEL
A. Stewart Kerr .... Detroit

ECON. CONSULTANT
Clyde T. Hardwick .... Houghton
HISTORIAN
Wm. J. Stapleton, Jr., MD .... Detroit
ASS'T HISTORIAN
Wm. M. LeFevre, MD .... Muskegon

SCIENTIFIC EDITOR
John W. Moses, MD .... Detroit


COUNCILOR DISTRICT MAP

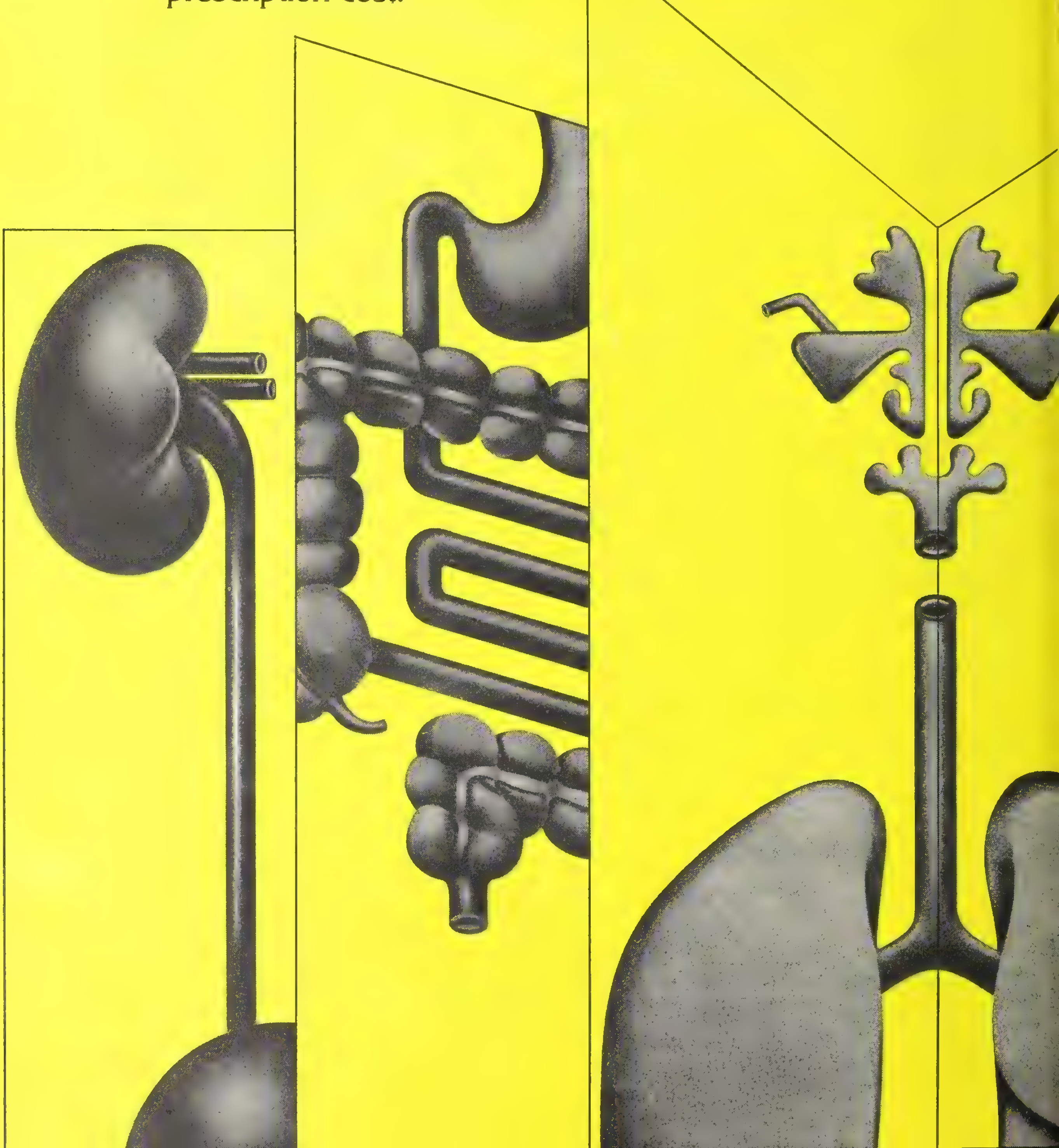
First District Councilors: (Wayne County)
Edward J. Tallant, MD, Detroit
Ralph R. Cooper, MD, Detroit
Frank G. Bicknell, MD, Detroit
Milton R. Weed, MD, Grosse Pointe Park
Brock E. Brush, MD, Detroit
Second District Councilor: Ross V. Taylor, MD, Jackson
Counties: Clinton, Eaton, Hillsdale, Ingham, Jackson
Third District Councilor: Robert M. Leitch, MD, Union City
Counties: Branch, Calhoun, St. Joseph
Fourth District Councilor: W. Kaye Locklin, MD, Kalamazoo
Counties: Allegan, Berrien, Cass, Kalamazoo, Van Buren
Fifth District Councilor: Noyes L. Avery, MD, Grand Rapids
Counties: Barry, Ionia-Montcalm, Kent, Ottawa
Sixth District Councilor: Ernest P. Griffin, Jr., MD, Flint
Counties: Genesee, Shiawassee
Seventh District Councilor: John J. Coury, MD, Port Huron
Counties: Huron, Sanilac, Lapeer, St. Clair
Eighth District Councilor: A. Carl Stander, MD, Saginaw
Counties: Gratiot-Isabella-Clare, Midland, Saginaw, Tuscola
Ninth District Councilor: Adam C. McClay, MD, Traverse City
Counties: Grand Traverse-Leelanau-Benzie, Manistee, Northern Michigan (Antrim, Charlevoix, Cheboygan and Emmet combined), Wexford-Missaukee
Tenth District Councilor: Robert C. Prophater, MD, Bay City
Counties: Alpena-Alcona-Presque Isle, Bay-Arenac-Iosco, North Central Counties, (Otsego, Montmorency, Crawford, Oscoda, Roscommon, Ogemaw, Gladwin and Kalkaska, combined)
Eleventh District Councilor: Brooker L. Masters, MD, Fremont
Counties: Mason, Mecosta-Osceola-Lake, Muskegon, Newaygo, Oceana
Twelfth District Councilor: William A. LeMire, Sr., MD, Escanaba
Counties: Chippewa-Mackinac, Delta-Schoolcraft, Luce, Marquette-Alger
Thirteenth District Councilor: Donald T. Anderson, MD, Wakefield
Counties: Dickinson-Iron, Gogebic, Houghton-Baraga-Keweenaw, Menominee, Ontonagon
Fourteenth District Councilor: Donato F. Sarapo, MD, Ann Arbor
Counties: Lenawee, Livingston, Monroe, Washtenaw
Fifteenth District Councilor: Sydney Scher, MD, Mount Clemens
Counties: Macomb, Oakland

Tract Record.

A record of clinical efficacy in treating bacterial infections of the respiratory, genitourinary and gastrointestinal tracts caused by susceptible strains of pneumococci, H.influenzae, staphylococci, streptococci, Klebsiellae, E.coli, Enterobacter, Shigella.

A record of years of dependable broad-spectrum activity.

A record of high urine and serum antibiotic levels all with a 500mg. potency, b.i.d. convenience and low prescription cost.



Tetrex® bidCAPS®
(500 mg. tetracycline phosphate complex)

For complete information consult Official Package Circular.
(3) 4/2/70

Indications: Infections of respiratory, gastrointestinal and genitourinary tracts and skin and soft tissues due to tetracycline-sensitive organisms. In staphylococcal infections, indicated surgical procedures should be performed.
Contraindications: Hypersensitivity to tetracyclines.
Warnings: Photodynamic reactions have been produced by tetracyclines. Natural and artificial sunlight should be avoided during therapy. Stop treatment if skin discomfort occurs. With renal impairment, systemic accumulation and hepatotoxicity may occur. In this situation, lower doses should be used and serum estimations may be necessary during prolonged therapy. Tooth staining and enamel hypoplasia may be induced during tooth development (last trimester of pregnancy, neonatal period and childhood).
Precautions: Mycotic or bacterial superinfections may occur. Infants may develop increased intracranial pressure with bulging fontanels. Cases of gonorrhea with a suspected primary lesion of syphilis should have darkfield examinations before receiving treatment. In all other cases where concomitant syphilis is suspected, monthly serological tests should be performed for a minimum of 4 months.
Adverse Reactions: Glossitis, stomatitis, nausea, diarrhea, flatulence, proctitis, vaginitis, dermatitis, and allergic reactions may occur.
Usual Adult Dose: One Gm./day in 2 or 4 equally divided doses. Continue therapy for ten days in Group A beta-hemolytic streptococcal infections. Administer one hour before or two hours after meals.
Supplied: Capsules—250 mg. in bottles of 16 and 100. bidCAPS—500 mg. in bottles of 16 and 50.

A.H.F.S. Category 8:12

BRISTOL

BRISTOL LABORATORIES
Division of Bristol-Myers Co.
Syracuse, New York 13201

programs were born in dissension which never ended. Blue Shield never adopted in its entirety the Michigan Relative Value Coding or unit values and this is one of the reasons that the AMA ultimately accepted essentially the California Relative Value Scale in its Current Procedural Terminology. It must be clear to anyone with a basic knowledge of medical economics that quality control and fee comparisons can never be made unless there is adequate standardized, descriptive coding of each of the multiple services available to the patients. The medicine section, for example, of the current Blue Shield's coding has never been adequate and Blue Shield has not cooperated in the repeated requests for a mutual solution of this problem from the Michigan Society of Internal Medicine. The MSMS House of Delegates has repeatedly approved the Michigan Relative Value Scale for coding purposes.

In the last few years, primarily since the variable fee programs were instituted, the estrangement between Blue Shield and physicians has widened. The insistence of some segments of labor for complete first-dollar coverage of hospital care probably contributed to Blue Shield management problems and consequent decisions. The establishment of a premium rate structure which was to gradually decrease Blue Shield's large reserves, was immediately proven to be more rapidly depleting than anyone had estimated. The presenting financial crisis was publicly blamed on the physicians of Michigan and an abnormal escalation of fees. Inadequate recognition was given the necessity for physicians to meet marked increases in overhead as well as to upgrade charges from the long-standing low fee schedule of the M-75 programs. Unquestionably the inclusion of employees in Keogh retirement programs, was also a major item of expense to physicians as well as other increments in every phase of practice.

Finally, there seemed to be a planned harassment of physicians whose charges were over the "screen" of Blue Shield. The initial screen levels were also later lowered as Blue Shield's financial problems became more acute. This consequently caused a change in reimbursement in those governmental programs for which Blue Shield acted as fiscal intermediary since Shield could not pay out more in the government programs than was paid in their regular contracts. Blue Shield management in a few of the higher echelons became very arrogant in dealing with some of the physicians. For some time there was resistance on the part of Blue Shield to first refer controversial matters to the local county medical society for peer review. Many other factors have also led to an increasing lack of rapport in professional relations between Blue Shield and physicians.

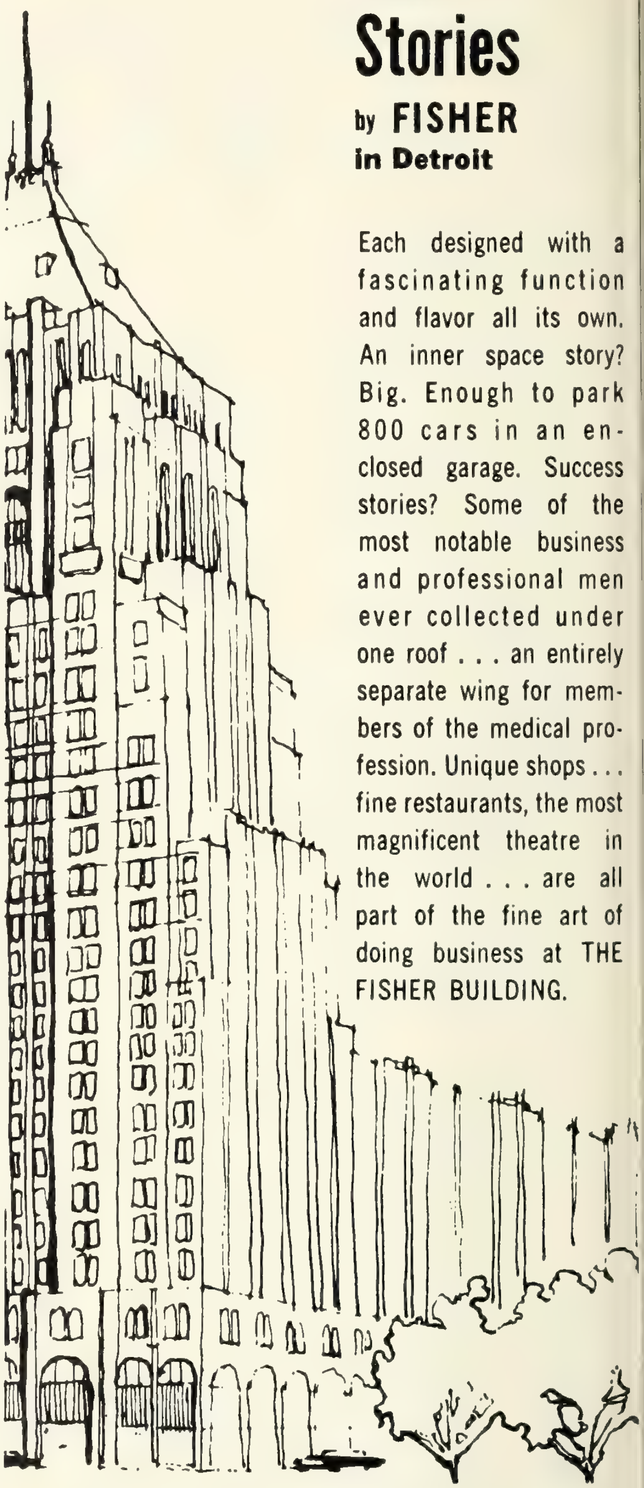
Many lay people have told the profession that medical care must now be controlled like a public utility. It is certain that complete governmental control will do as much for medical care as has been accomplished for the railroad or the postal service. How many people know the true cost to the taxpayer of treating any given condition, for example, in a VA hospital which at present represents complete government care? Physicians are particularly disturbed to be told some of these things by officers in public utilities. Everyone knows that rate increases for utilities must be approved by various governmental commissions. But actually, such increases only control the possible returns to the stockholders on their investments.

In closing, it must again be emphasized that Blue Shield is selling a service contract but only physicians can render the services. There is still time for Blue Shield to improve its professional relations but this will be entirely dependent on its rapport with physicians. There are some policies of the MSMS which are not going to be subject to change without some further estrangement with the medical profession. One such policy, for example, is the right of individual case participation. This policy has been repeatedly affirmed by the MSMS. If MMS gets to the position that it can no longer offer service contracts then additional changes will be made by the legislature. Blue Shield could (and in my opinion should) offer only indemnity contracts with a definite fixed fee schedule. Such a change would permit actuarily sound fiscal policies and therefore stabilize premiums so that the present repeated boost in premiums could become less frequent and less necessary.

No matter what the future of Blue Shield may hold everyone should know that the MSMS is firmly committed to a policy of peer review and has established the mechanisms for properly developing and carrying out professional peer review of physicians by physicians. Blue Shield, at present, services in subscriber contracts and government programs, approximately two-thirds of Michigan's population. Blue Shield should be in a position to supply invaluable information to the MSMS and its peer review structure but again, this is possible only if adequate procedure identification is available. Quality of care is paramount in peer review but in today's world it is increasingly apparent that the quality and economics of care are inseparable.

When properly coded and computerized, the services of varying areas will indicate differences in over- or under-utilization, hospital length of stay, and also possible medical service deficiencies which should be rectified to improve quality. Future medical education can be geared to many of the facets of information which can be collected but such information will require very sophisticated diagnostic coding of services. Blue Shield, the MSMS and the physicians of Michigan have

(Continued on Page 108)



28 Tall Stories
by FISHER
in Detroit

Each designed with a fascinating function and flavor all its own. An inner space story? Big. Enough to park 800 cars in an enclosed garage. Success stories? Some of the most notable business and professional men ever collected under one roof . . . an entirely separate wing for members of the medical profession. Unique shops . . . fine restaurants, the most magnificent theatre in the world . . . are all part of the fine art of doing business at THE FISHER BUILDING.

Call or write the Rental Office
THE FISHER BUILDING
Across from the General Motors Bldg.
Detroit, Mich. 48202 (313)874-4444

THE MICHIGAN HEART ASSOCIATION

22ND SCIENTIFIC SESSIONS AND HEART DAYS

April 29 & 30; May 1 Cobo Hall, Detroit

Friday, April 30

THE FAILING MYOCARDIUM *Designed for practicing clinicians*

Clinical Diagnosis and Management of Diseases
Noble O. Fowler, M.D., Director,
Division of Cardiology, University of Cincinnati

WILSON-MYERS LECTURE
Clinical and Laboratory Measures of Myocardial Function
Eugene Braunwald, M.D., Chairman,
Dept. of Medicine, University of California, San Diego

Acute Ventricular Failure—Concepts of Diagnosis and Management
H.J.C. Swan, M.D., Ph.D., F.R.C.P., Chief,
Cardiology, Cedars-Sinai Medical Center, Los Angeles

TREATMENT OF THE FAILING MYOCARDIUM

Digitalis: New Thoughts about an Old Drug
James E. Dougherty, M.D., Professor,
University of Arkansas

Diuretics: Their Use and Abuse
Walter M. Kirkendall, M.D., Director,
Renal-Hypertension-Electrolyte Division, University of Iowa Hospitals

Panel—Acute Congestive Heart Failure **Panel—Chronic Congestive Heart Failure**

Saturday, May 1

ADVANCES IN CARDIAC RHYTHM THERAPY *concurrent sessions*

Advances in Cardiac Rhythm Therapy
Electrical Safety in the Hospital
Hyperlipoproteinemias and CVD problems in Renal Insufficiency

This program is valued by the AAGP at 11 credit hours.

Harold E. DePree, M.D., President MHA
Richard D. Judge, B.S.E.E., M.D., Chairman, Program Committee
Abraham Brickner, ACSW, Executive Director

Thursday April 29:

STROKE

Diagnosis and Management of Transient Ischemic Attacks
Diagnosis and Management of Acute Stroke

TREATMENT AND REHABILITATION OF PATIENTS

A five talk symposium
Five special interest concurrent workshops

NOTE: For nurses, a CARDIOVASCULAR PROGRAM, all day Friday, April 30, offers a lecture and concurrent workshops. On Thursday, there will be classes in ECG techniques and Cardiopulmonary Resuscitation; annual meeting of MHA members will be on Friday.

The Headquarters Hotel is the Pontchartrain; make reservations early.

Affiliate: American Heart Association **Member: Michigan United Fund**

New Members

Members of the Michigan State Medical Society join in welcoming the following new members into a progressive state medical organization. MSMS is dedicated to promoting the science and art of medicine, the protection of the public health, and the betterment of the medical profession. Each new member is encouraged to join with other MSMS members at both the local and the state levels in achieving these goals.

George M. Awais, MD, 113 E. Williams St., Owosso 48867
Errikos Constant, MD, 1200 Michigan Ave., East Lansing 48823
Indudhar S. Hiremath, MD, Lapeer State Home & Training School, Lapeer 48446
James C. Kloepfer, MD, 2345 Indian Hills Dr., Okemos 48864
William B. Martin, MD, Upjohn Co., Bldg., 24-2 Unit 7243, Kalamazoo 49001
Lionel W. Rosen, MD, Dept. of Psychiatry-MSU, East Lansing 48823
Carmela M. Stella, MD, 191 North Ave., Mt. Clemens 48043
Vincente Uy, MD, 1218 Oregon St., Lapeer 48446
Laird E. Hamstra, MD, 515 Lakeside Dr., S.E., Grand Rapids 49506
Beryl B. Spruce, MD, 207 Fletcher, Ann Arbor 48104
Stephen P. Wilensky, MD, St. Lawrence Hospital, Radiology Dept., Lansing 48914
Ruth M. Waring, MD, P.O. Box 199, Chassell 49916
T. P. Waring, MD, P.O. Box 199, Chassell 49916
Karl F. Yoshonis, MD, 1322 E. Michigan Ave., Lansing 48912
James R. Baker, MD, 1100 Union City Rd., Coldwater 49036
Samuel H. Carter, MD, St. Joseph Mercy Hosp., Ann Arbor 48104
Leland R. Matthews, MD, 1509 Ardmore, S.E., Grand Rapids 49507
Jose L. Perez, MD, 19720 Revere St., Detroit 48234
Philip L. Watterson, MD, 3626 Camelot Dr., S.E., Grand Rapids 49506

BLUE SHIELD AND MSMS/Continued

(Concluded from Page 106)

many common objectives which can be obtained through mutual cooperation.

The Blue Shield board of directors should thoroughly understand and review the presently existing estrangement between Blue Shield and the physicians of Michigan. It is easy but not reasonable to castigate or blame individuals or the profession for this situation. It is important that a critical appraisal of their entire operation be made by the new MMS board of directors. It would probably also be advisable that an outside independent management consulting firm or team be employed to assist in this appraisal. Despite whatever develops in Blue Shield policies in the future, the MSMS will offer adequate peer review mechanisms to Blue Shield as well as all other properly interested third parties.

The Michigan State Medical Society will cooperate in all endeavors which might offer improvements in the quality of care, the distribution of care, and the delivery of care. Blue Shield, Blue Cross and the Michigan State Medical Society have a big stake in the quality of medical care. Let's all think it over.

Detroit-Argentina exchange carried out in unusual case

Detroit general surgeon and MSMS councilor, Brock E. Brush, MD, has provided aid to an Argentine medical practitioner in an inter-continental exchange of medical knowledge.

The Argentine physician, Doctor Carlos Actis, sought aid from a Michigan State University agricultural team providing technical assistance to a college in Doctor Actis' rural home area of Balcarce.

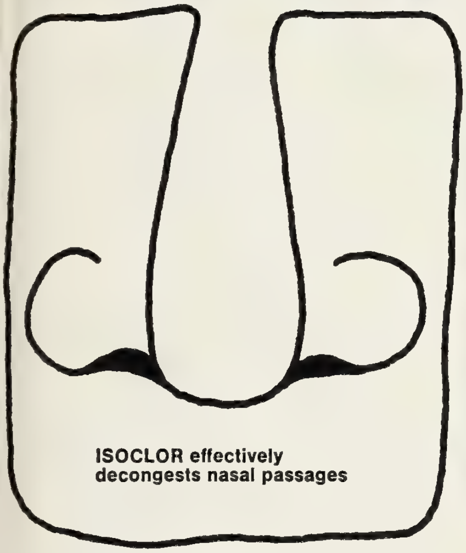
Doctor Actis was attempting to treat a young Balcarce boy, Porto Carlos Horacio, who has a serious brain problem. Through the MSU team, Doctor Actis sent to the U.S. a two-page medical history of the boy as well as several X-rays of the boy's skull.

The agricultural team sent the materials to Irving Wyeth, of the Institute of International Agriculture at MSU. Mr. Wyeth contacted members of the MSMS staff, who in turn, suggested he send the medical materials to Doctor Brush and his colleagues at Henry Ford Hospital.

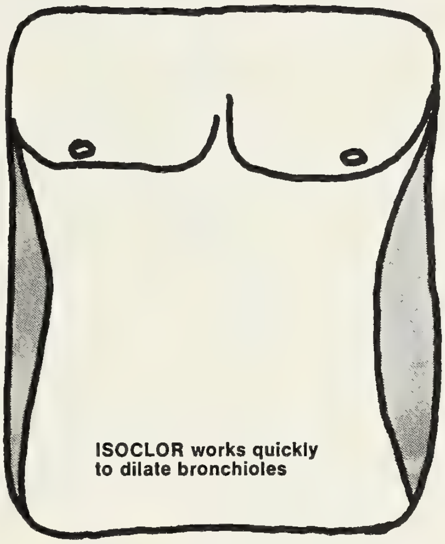
After studying the X-rays and medical history with help of an Argentine doctor in Detroit, Doctor Brush wrote to Doctor Actis, making a diagnosis matching that of Argentine doctors', of probable brain disease. Neither U.S. nor Argentine doctors have been able to completely understand the disease, which causes occasional spells of spasm in the patient, though tranquilizers are being used, and for periods of time, Porto is quite normal.

The handling of his case has been unusual and very interesting. Further correspondence on his progress will be carried on between Argentine and American consultants.

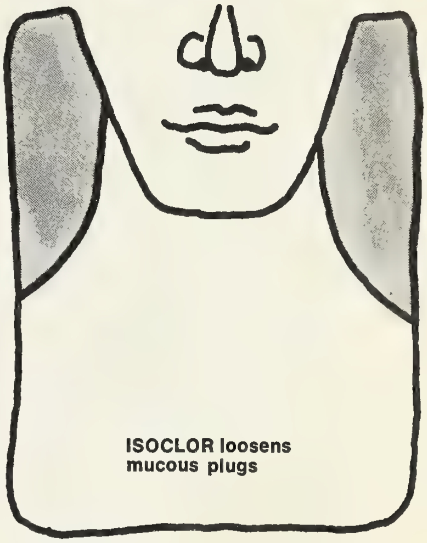
HERE ARE THE COLD FACTS:



ISOCLOR effectively decongests nasal passages

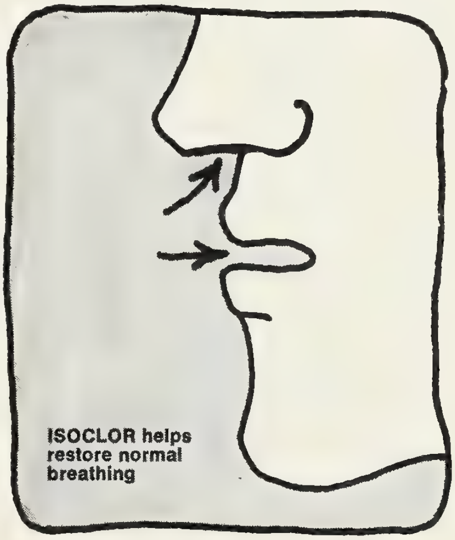


ISOCLOR works quickly to dilate bronchioles



ISOCLOR loosens mucous plugs

ISOCLOR relieves runny eyes



ISOCLOR helps restore normal breathing

ISOCLOR promptly and effectively combats symptomatic miseries of the common cold and influenza

ISOCLOR helps patients face the cold facts

ISOCLOR®

Isoclor provides quick, long lasting relief of respiratory congestion and discomfort brought on by common colds, influenza, and allergies. Isoclor contains chlorpheniramine maleate — one of the most potent and safest antihistamines. And pseudoephedrine HCl — a decongestant bronchodilator providing effective and long lasting relief for the entire respiratory tract. Both work to extend the range of relief.

COMPOSITION: Each tablet or 2 teaspoonfuls of liquid contains:

Chlorpheniramine Maleate	4 mg.
Pseudoephedrine HCl	25 mg.

Each ISOCLOR Timesule contains:

Chlorpheniramine Maleate	10 mg.
Pseudoephedrine HCl	65 mg.

In a special pellet form providing both prompt and sustained effect.

INDICATIONS: For symptomatic relief of colds, hay fever, allergic conjunctivitis, perennial rhinitis of allergic origin and sinusitis. Opens nasal, sinus and bronchial passages orally.

CONTRAINDICATIONS: Sensitivity to antihistamines or sympathomimetic agents. Severe hypertension or severe cardiac disease.

PRECAUTIONS: Use with caution in patients suffering with hyperthyroidism. Patients susceptible to the soporific effects of chlorpheniramine should be warned against driving or operating machinery should drowsiness occur.

CAUTION: Federal law prohibits dispensing without prescription.

SUPPLIED: Tablets: Bottles of 100 and 1000. Liquid: 4 oz. bottles, pints, and gallons; Timesules: Bottles of 50, 250, and 1000.

DOSAGE AND ADMINISTRATION:	Tablets	Liquid	Timesule
Adults:	1 q. 4 h.	2 tsp. q. 3-4 h.	1 q. 12 h.
Children 6-12 years:		1 tsp. q. 3-4 h.	
40-50 pounds:		¾-1 tsp. q. 3-4 h.	
30-40 pounds:		½-¾ tsp. q. 3-4 h.	
20-30 pounds:		¼-½ tsp. q. 3-4 h.	
15-20 pounds:		⅛-¼ tsp. q. 3-4 h.	

ARNAR-STONE LABORATORIES, INC.
QUALITY—RESEARCH—SERVICE
SUBSIDIARY OF AMERICAN HOSPITAL SUPPLY CORPORATION
Mount Prospect, Illinois 60056

Lilly
ILOSONE
LIQUID
250

**Not too little, not too much...
but just right!**

"Just right" amounts of Ilosone Liquid 250 can be dispensed easily from the pint bottle in *any* quantity you specify to meet your patients' precise needs—without regard to package size.

[illegible]

Ilosone Liquid 250

Erythromycin Estolate

(equivalent to 250 mg. of base per 5-ml. teaspoonful)

*Additional information available
to the profession on request.
Eli Lilly and Company
Indianapolis, Indiana 46206*

Lilly

[illegible]

The Michigan physician:

His use and evaluation of the professional meeting and pg course

By John N. Kotre, PhD
Floyd C. Mann, PhD
Neal A. Vanselow, MD
Ann Arbor

The present series of articles on the Michigan physician and his continuing education began with an overview of findings which included general evaluations of the education available in physicians' own hospitals and in the state at large.[1] It then moved to a discussion of motivational forces affecting physicians, on the assumption that a knowledge of these would aid an understanding of their continuing education activity.[2] Last month the focus was on a particular medium of education, the medical journal. It was found that most physicians reported devoting about three hours a week to periodical reading and thought highly of the journal as a source of information. General practitioners, osteopaths, and older physicians, however, placed less value on journals and tended to make less use of them.[3]

Two other educational activities—professional/scientific meetings and postgraduate courses—are considered in the present article. Both of these differ from the medical journal in several important ways. They involve the oral transmission of knowledge in a formal setting, and they demand one or more complete days of the physician's time, often requiring considerable travel to a distant medical center. How this kind of education is utilized by Michigan physicians, what general and specific evaluations are made of it, and how its perceived value compares with that of journal reading are the principal questions to which this article addresses itself.

The Professional Meeting

All four major groups of respondents—the statewide samples of MDs and DOs, the doctors' doctors (doctors to whom other doctors would take their personal medical problems), and informal/formal consultants (doctors with whom others consult informally and formally)—were asked the number of professional meetings sponsored by regional or national medical organizations that they had attended during the past two years. Their answers are shown in **Table 1.** While there was considerable variance in the number of meetings attended, the average for all groups was close to three. Of the four groups, doctors of osteopathy attended most meetings: 20 percent had been to seven or more over the past two years.* Consultants—but not doctors' doctors—reported that they attended more meetings than the general sample of medical doctors.

Meeting attendance was significantly associated with the specialty of respondents in the general sample of medical doctors. General practitioners and psychiatrists attended relatively few meetings: only 48 percent of the former and 52 percent of the latter had been to at least three meetings in the past two years. On the other hand, 70 percent of the surgeons sampled reported that they had attended at least three meetings in the previous two year period.

After indicating the frequency with which they attended professional meetings, respondents were invited to make assessments of six specific activities that ordinarily take place at such meetings. These were: the presentation of research papers, seminar discussions in which the physicians became actively involved, informal conversations with colleagues, lectures, demonstrations of new equipment, and the dissemination of information about new drugs. Physicians' ratings of the educational value of each activity are displayed in **Table 2.**

Lectures and seminar discussions which involved them were considered most valuable by all four groups of physicians. Between 53 and 62 percent of each group said they found great or very great

Scientific papers

Doctor Kotre and Doctor Mann are with the Center for Research on Utilization of Scientific Knowledge, where Doctor Mann is director. Doctor Vanselow is on the faculty of the Department of Postgraduate Medicine. All are at the University of Michigan.

*Attendance at a specified number of meetings sponsored by osteopathic associations is required of DOs.

TABLE 1

14. How many professional meetings sponsored by **regional or national** medical organizations have you attended during the last 2 years?

	Medical Doctors		Doctors of Osteopathy		Doctors' Doctors		Informal/Formal Consultants	
PERCENT responding:								
(0) None	8	19	1	2	0	10	2	9
(1) 1	11		1		10		7	
(2) 2	20		25		22		25	
(3) 3	18		18		29		20	
(4) 4-6	29		34		33		34	
(5) 7-9	7		9		5		6	
(6) 10-12	3	13	4	20	1	6	3	12
(7) 13 or more	3		7		0		3	
No Response	1		1		0		0	
	100		100		100		100	
Mean Category No. =	2.98		3.63**		3.06		3.24**	
N =	919		183		96		89	

**The mean of this distribution is significantly different from the mean of the Medical Doctors' distribution at the .01 level (t-test, two-tailed).

educational value in lectures, and between 51 and 71 percent found comparable value in seminar discussions. Informal conversations with colleagues were seen as moderately valuable, while information about new drugs, demonstrations of new equipment, and the presentation of research findings at paper sessions were seen as least valuable.

Although the four major groups were fairly uniform in their assessments of these activities, there were important differences between them. The doctors of osteopathy, first of all, were significantly more positive than medical doctors about informal conversations with colleagues, information about new drugs, and demonstrations of new equipment. They were significantly less positive about the presentation of research findings at paper sessions. It appears to be the practical rather than the theoretical aspects of medicine that are of concern to the osteopath. Both new drug information and new equipment demonstrations are clearly practical, and we can infer that in informal conversations with colleagues practical technology is passed from one physician to another. The one activity which is presumably the least practical—the presentation of research findings—elicited less favorable evaluations from the osteopaths.

Both the doctors' doctors and the informal/formal consultants perceived greater educational value in lectures and seminar discussions than did the general samples of MDs or DOs. Both criterion groups, however, found less value in new drug information, and one group, the consultants, said they derived less from the presentation of research papers.

When the replies of the general sample of medical doctors were analyzed by specialty, it was found that general practitioners (like osteopaths) derived more value from practical activities: 33 percent found information about new drugs to be of great or very great value and 23 percent considered demonstrations of new equipment to be of comparable value. In making an overall evaluation of professional meetings, however, only 37 percent of the general practitioners—a smaller proportion than in any of the specialties—found great or very great educational value in them. Psychiatrists derived less value than others from three professional meeting activities (lectures, seminar discussions, and demonstrations of new equipment), and they were nearly as negative as general practitioners in their overall evaluation of meetings, only 41 percent finding great or very great value in them.

There were also age differences in MD assessments of activities at professional meetings. More doctors under 36 (63 percent) said they benefited from lectures, and more in the 56-65 (25 percent) and over 65 (41 percent) brackets found information about new drugs to be of value. In making overall evaluations of the professional meeting, younger doctors were more positive than older doctors. Sixty-four percent of those under 36 reported finding great or very great value in such meetings.

Most surprising of these findings was the high regard of practicing physicians for the lecture as an educational technique—a regard that was even higher for the criterion doctors and for those MDs who were under 36. This evaluation of the lecture can be contrasted with that of many undergraduate medical students and medical educators, who regard the lecture as a purely passive and outdated form of learning. The findings reported here may result from the fact that most practicing physicians have had little exposure to the more recent and

TABLE 2

15. When you attend a professional meeting sponsored by a **regional or national** medical organization, to what extent do you generally find educational value in the following?

	PERCENT responding TO A GREAT or VERY GREAT EXTENT:			
	Medical Doctors	Doctors of Osteopathy	Doctors' Doctors	Informal/Formal Consultants
(d) Lectures	54	53	62*	59*
(b) Seminar discussions where you get involved in the discussions	51	52	67**	71**
(c) Informal conversations with your colleagues who attend the meeting	36	44**	38	39
(f) Information about new drugs	22	29**	16**	17**
(e) Demonstrations of new equipment	20	30**	16	16
(a) Research findings presented at paper sessions	19	13**	19	12*
Average, No Response***	6	4	1	3
N =	919	183	96	89

---

*The mean of this distribution (not shown here) is significantly different from the mean of the Medical Doctors' distribution at the .05 level (t-test, two-tailed). On occasion, this significant mean difference is not reflected in the figures above, which present only the percentages of respondents in the upper two categories of the distribution.

**The mean is significantly different at the .01 level (t-test, two-tailed).

***The no response rate averaged for the six items.

innovative techniques of medical education; on the other hand the esteem in which the lecture is held by the physician in practice suggests that those involved in planning continuing medical education programs should think carefully before completely abandoning this traditional teaching method.

The Postgraduate Course

Table 3 presents data on attendance at postgraduate programs sponsored by the University of Michigan, Wayne State University, and other schools. Most striking is the relative lack of attendance at such programs. During the two years prior to the time they completed the questionnaire, only 25 percent of the medical doctors had been to a program at Michigan, only 15 percent had been to one at Wayne State, and only 33 percent to one at other (out-of-state) schools. Ninety-one percent, in contrast, had attended at least one professional meeting during the same period of time. Compared with medical doctors, doctors of osteopathy attended more courses within the state of Michigan and fewer outside of it, while criterion doctors attended more outside the state. Attendance at courses was not associated with specialty or age among MD respondents.

Specific assessments of the postgraduate course were taken by presenting to respondents 15 phrases which physicians sometimes use to describe their experience with postgraduate medical education. Three of the phrases might be considered positive evaluations: "excellent instructors," "excellent program," "well attended." One phrase might be considered a neutral description: "used discussion method of teaching rather than just straight lecture." Eleven might be considered negative criticisms: for example, "not practical enough," "too long," "audience was talked down to." Physicians were asked to indicate the extent to which they felt each phrase described a typical postgraduate course.

Medical doctors in Michigan evaluated the typical postgraduate course quite favorably (**Table 4**). The three phrases giving positive evaluations of the course headed the list of phrases which doctors said were most descriptive of the course. Over half the medical doctors said the descriptions "excellent program," "excellent instructors," "well attended" applied to the postgraduate course to a great or very great extent. The major negative description of the course, on the other hand, was applicable to the same extent in the view of only 26 percent of the doctors. The theme of the principal criticisms was that the course was not practical enough. About a quarter of the doctors said the typical postgraduate course was "too research oriented," "not practical enough," and did not have "enough bedside teaching."

Doctors of osteopathy also rated the postgraduate course quite favorably, though they were less positive than the sample of medical doctors. The three phrases evaluating the course in positive terms headed their list of fitting descriptions, but significantly fewer osteopaths than medical doctors said that two of these phrases, "excellent instructors" and "well attended," characterized the typical postgraduate course. Osteopaths were more emphatic than medical doctors in saying that courses were not practical enough: 31 percent said "too research oriented"; 37 percent "not practical enough"; 27 percent "not enough bedside teaching"; and 15 percent "too specific"—all significantly more than medical doctors. More osteopaths

TABLE 3

17. How many postgraduate courses have you attended as an enrollee during the last 2 years at . . .

	Medical Doctors	Doctors of Osteopathy	Doctors' Doctors	Informal/Formal Consultants
PERCENT responding:				
. . . the University of Michigan				
(0) None	62	53	66	62
(1) 1	14	15	10	12
(2) 2	9 }25	13 }36	6 }22	8 }25
(3) 3 or more	2	8	6	5
No Response	13	11	12	13
	100	100	100	100
Mean Category No. =	0.48	0.75**	0.56	0.56
. . . Wayne State				
(0) None	67	66	72	76
(1) 1	8	12	2	3
(2) 2	5 }15	2 }18	3 }8	2 }7
(3) 3	2	4	3	2
(4) 3 or more	2	4	3	2
No Response	18	16	20	17
	100	100	100	100
Mean Category No. =	0.32	0.41*	0.27	0.18**
. . . Other Schools* **				
(0) None	53	61	48	40
(1) 1	15	8	22	20
(2) 2	11 }33	9 }24	16 }45	24 }56
(3) 3 or more	7	7	7	12
No Response	14	15	7	4
	100	100	100	100
Mean Category No. =	0.72	0.59*	0.88*	1.11**
N =	919	183	96	89

---

*The mean of this distribution is significantly different from the mean of the Medical Doctors' distribution at the .05 level (t-test, two-tailed).

**The mean is significantly different at the .01 level (t-test, two-tailed).

***Ten percent of the Doctors of Osteopathy had been to at least one course at the Chicago College of Osteopathy in the past two years. The Chicago College of Osteopathy is not included in the category "other schools."

than medical doctors felt courses should have been held at their community hospitals, more said they felt like outsiders, and more said they felt inadequate and incompetent as a result of courses.

Two trends characterized the replies of criterion physicians to these fifteen items: (1) both doctors' doctors and consultants differed from the general sample of medical doctors in the same direction (in six instances, both groups were significantly different from medical doctors, and in three instances only the consultants were significantly different); (2) when both osteopaths and a criterion group differed significantly from medical doctors (five instances), it was always in opposite directions, osteopaths being more critical and criterion physicians less critical. Thus, one or both criterion groups were *more* inclined than the general sample of MDs to say that "excellent program," "well attended," and "used discussion method" described a typical postgraduate course, and one or both were *less* inclined to complain that courses were "too research oriented," "not practical enough," and did not have "enough bedside teaching." In addition to being less bothered by the impracticality of some courses, criterion doctors were also less likely to characterize courses as being too expensive, too long, or generative of feelings of inadequacy in the participant. There is a suggestion in Tables 3 and 5 that criterion physicians were more likely than doctors in the general sample to be thinking of out-of-state courses when making these evaluations to the "typical" course.

Within the general sample of medical doctors, general practitioners (64 percent) were more likely than others to describe the typical course as providing an excellent program. Psychiatrists stood out in being more negative than others about postgraduate programs. Fewer thought the typical program was excellent (37 percent) or well attended (30 percent) and more (12 percent) thought it

TABLE 4

36. Below are a series of phrases which physicians sometimes use to describe their experience with postgraduate medical education. Think of a typical course you have attended and indicate to what extent you feel the different phrases below describe your feelings regarding that course.

	PERCENT saying the phrase describes a typical course TO A GREAT or VERY GREAT EXTENT:			
	Medical Doctors	Doctors of Osteopathy	Doctors' Doctors	Informal/Formal Consultants
(j) Excellent program	57	54	68**	63*
(d) Excellent instructors	56	54**	59	62
(k) Well attended	53	39**	67**	62**
(i) Too research oriented	26	31**	21	19*
(b) Not practical enough	24	37**	23	15**
(h) Not enough bedside teaching	21	27**	13*	16*
(m) Could have learned as much by reading	14	16	14	15
(o) Used discussion method of teaching rather than just straight lecture	11	11	17**	14*
(l) Too long	10	8	7**	6**
(c) Too specific	10	15**	13	8
(a) Too expensive	8	9	5**	3**
(e) Treated me as an outsider	8	11**	9	9
(g) Should have been held at our community hospital	7	10**	7	10
(n) Audience was talked down to	6	10	7	6
(f) Made me feel inadequate and incompetent	4	6**	4	1**
Average, No Response***	13	11	10	8
N =	919	183	96	89

---

*The mean of this distribution (not shown here) is significantly different from the mean of the Medical Doctors' distribution at the .05 level (t-test, two-tailed). On occasion, this significant mean difference is not reflected in the figures above, which present only the percentage of respondents in the two upper categories of the distribution.

**The mean is significantly different at the .01 level (t-test, two-tailed).

***The no response rate averaged for the fifteen items.

TABLE 5

16. To what extent do you find educational value in the following activities?

	Of those who use the activity, PERCENT responding TO A GREAT or VERY GREAT EXTENT:			
	Medical Doctors	Doctors of Osteopathy	Doctors' Doctors	Informal/Formal Consultants
(h) Reading periodical literature	52	53	61**	63**
(N who report use)	(883)	(174)	(95)	(87)
(r) Professional or scientific meetings sponsored by regional or national medical organizations	53	41**	56**	56**
(N who report use)	(864)	(179)	(93)	(87)
(s) Postgraduate programs sponsored by the University of Michigan	41	39	23**	28*
(N who report use)	(543)	(99)	(57)	(60)
(v) Postgraduate programs sponsored by other schools	40	32	37	39
(N who report use)	(415)	(65)	(60)	(62)
(t) Postgraduate programs sponsored by Wayne State	32	42**	29**	27*
(N who report use)	(386)	(54)	(42)	(41)
(u) Postgraduate courses sponsored by the Chicago College of Osteopathy	—	38	—	—
(N who report use)	(0)	(37)	(0)	(0)

---

*The mean of this distribution (not shown here) is significantly different from the mean of the Medical Doctors' distribution at the .05 level (t-test, two-tailed). On occasion, this significant mean difference is not reflected in the figures above, which present only the percentage of respondents in the upper two categories of the distribution.

**The mean is significantly different at the .01 (t-test, two-tailed).

was too long. Fewer psychiatrists (four percent) than others, however, thought they were talked down to at courses.

Age differences were also apparent in these descriptions of the typical postgraduate course. More doctors under 36 (24 percent) thought they could have learned as much by reading; fewer thought instructors were excellent (39 percent) or that discussion was typically used (nine percent), and none felt inadequate as a result of courses. Doctors between 56 and 65 were the most positive about courses: fewer felt they were too expensive (six percent) or should have been held locally (three percent), and more described them as excellent programs (62 percent) which featured excellent instructors (63 percent).

Overall Evaluations of the Professional Meeting and the Postgraduate Course

Overall evaluations of the professional meeting and the postgraduate course as sources of education were made by physicians in the context of rating a total of twenty-two distinct activities (for example, reading periodical literature, attending hospital meetings, obtaining formal consultation, listening to audio tapes). **Table 5** takes those respondents who said they attended meetings and courses and shows what percent derived great or very great value from them. To provide a point of reference, it also presents comparable data on evaluations of reading periodical literature.*

Table 5 shows that the general sample of medical doctors considered professional meetings about as valuable as periodical reading and more valuable than postgraduate courses. Courses sponsored by Michigan and out-of-state schools were felt to be slightly more beneficial to the general sample than those sponsored by Wayne State. Compared with medical doctors, osteopaths were less positive about professional meetings and more positive about Wayne State courses. Criterion doctors were more positive than the general sample about professional meetings but less positive about offerings at Michigan and Wayne State.

In general, these evaluations of particular activities parallel the use made of them, with those groups who made greater use of an activity valuing it more highly. The one striking exception concerns osteopaths and the professional meeting: DOs attended more meetings than others but they valued these meetings less highly.

A final item in the questionnaire asked the optimal length of time physicians preferred to spend at professional meetings or postgraduate courses. Three days was the most preferred length for professional meetings, although general practitioners, psychiatrists, and osteopaths (all of whom were less positive about such meetings) preferred shorter meetings. Only 15 percent each of the MD general practitioners and psychiatrists and seven percent of the osteopaths—compared, for example, with 40 percent of the MD internists—preferred meetings of more than three days in length.

Three days was also the preferable length for postgraduate courses. Osteopaths and psychiatrists (both of whom were less positive about the "typical course) preferred shorter meetings than others, only 16 percent of the former and 13 percent of the latter (compared with 39 percent of the MD internists) preferring courses of more than three days. MD general practitioners (who were more positive than others about the "typical" course) were second only to internists in their preference for longer courses. Twenty-nine percent of the general practitioners said their choice would be four or more days. Medical doctors in the upper peninsula, who have to travel a good deal to attend courses, preferred longer ones; and those in west central and southeast Michigan preferred shorter ones.

Summary and Implications

Michigan physicians reported attending approximately three professional meetings during a two-year period, but the majority of respondents said they had not been to a postgraduate course at Michigan, Wayne State, or other schools during the same period of time. The perceived educational value of professional meetings was nearly as great as that of periodical reading and substantially greater than that of postgraduate courses.

Four groups of physicians stood out in their use and evaluation of the professional meeting and/or the postgraduate course:

(1) General practitioners, who tended to make less use than others of the medical journal and to value it less highly,[3] also attended professional meetings less frequently and did not think as highly of their educational value. Apparently they were not receiving enough of what they found of value at such meetings—information about the practical aspects of medicine. General practitioners, however, were more positive than others about the "typical" postgraduate course. This finding may be partly explained by the fact that, during the time period involved, a majority of University of Michigan courses were directed specifically at the generalist.

---

*The percentages for "reading periodical literature" are slightly different from the percentages reported in the previous article on the medical journal.[3] To provide comparability across activities, it was necessary in the present instance to base percentages on the number of physicians who actually engaged in each activity.

(2) Osteopaths, who tended to make less use of the journal and to value it less highly,[3] were distinctively high in their attendance at professional meetings but distinctively low in their evaluation of them. They attended more in-state courses and fewer out-of-state courses and were less positive about the typical course (although more positive about Wayne State offerings). In making assessments both of the professional meeting and the postgraduate course, osteopaths showed much concern for the practical side of medicine.

(3) Psychiatrists, who made less use than others of the medical journal,[3] were among the least frequent attenders at professional meetings and were consistently less positive than others about both professional meetings and postgraduate courses.

(4) Finally, criterion physicians, who tended to make more use of the journal and to value it more highly,[3] expressed less of a preference for in-state courses and reported greater attendance at out-of-state courses. The opportunity to choose educational offerings on a national rather than a statewide level may explain why these physicians have a high regard both for the professional meeting and for the "typical" postgraduate course.

The implications of the findings for these four groups would appear to be clear enough. Efforts need to be made to create more programs that meet the practical needs of the generalist, whether he is an MD or a DO. Special effort is also needed to identify and meet the unique educational requirements of psychiatrists. Finally, the particular role of criterion doctors as on-the-spot resources for their colleagues must be kept in mind, and programs designed that will make them even more effective in their local settings as transmitters of the knowledge they acquire at national conferences.

A disturbing aspect of the study for the authors was the relatively poor evaluation given by all respondents to the medical school postgraduate course. Although it ran a poor third to the medical journal and regional or national scientific meeting in terms of perceived educational value, the items which probed at potential causes of physician dissatisfaction with university courses (**Table 4**) failed to identify specific reasons for this evaluation. In this regard, the data raise more questions than they answer and indicate the need for more study before steps can be taken to improve the calibre and pertinence of this type of educational activity.

References

1. Mann, F., Kotre, J., Reilly, A., and Vanselow, N. The Michigan Physician and His Continuing Education, *Michigan Medicine*. 69: 981, 1970.
2. Mann, F., Kotre, J., Reilly, A., and Vanselow, N. The Michigan Physician: His Work Needs and Opportunities, *Michigan Medicine*. 69: , 1970.
3. Kotre, J., Mann, F., Morris, W., and Vanselow, N. The Michigan Physician's Use and Evaluation of the Medical Journal, *Michigan Medicine*.

DRUG THERAPY PROBLEMS

By Robert Pearson, MS
Persis Mehta, PhD
Ann Arbor

Q. Is there any information on the treatment of arthritis with histidine? (B.S., Trenton, Mich.)

A. *Dr. Donald Gerber of the State University of New York Downstate Medical Center in Brooklyn found histidine to be as effective as, and without the side effects of, gold therapy in patients with rheumatoid arthritis. While on histidine therapy, some of these patients were able to reduce considerably the doses of their usual medications such as aspirin, prednisone, phenylbutazone and Darvon.®*

Q. What is the dose of Vitamin K in cirrhosis of the liver? (M.C., Southfield, Mich.)

A. *In cases where the inadequate secretion of bile salts contributes to the hypoprothrombinemia of advanced cirrhosis, Vitamin K may be administered parenterally in a daily dose of 10 mg. Larger doses are not recommended as they may actually result in a further depression of prothrombin concentration, the mechanism for which is unknown.*

Q. What is the composition and therapeutic use of Thiola®? (D.G., Cleveland, Ohio)

A. *Thiola® (alpha-mercaptopropionylglycine), an analog of penicillamine, is used in the treatment of cystinuria. It is considered to be about as effective as D-penicillamine in lowering urinary cystine excretion levels in cystinurics. At the present time, this drug is not approved by the F.D.A. for distribution within the United States.*

Q. Which sedative may be used in a patient with liver damage? (D.N., Ann Arbor)

A. *Ethinamate (Valmid®) is not significantly metabolized in the liver hence is not contraindicated in hepatic damage. The drug also does not affect respiration, pulse, blood pressure, the hematopoietic system or kidney function in normal therapeutic doses. Barbital is the only barbiturate which is not metabolized in the liver and may also be used as a sedative for this purpose.*

Mr. Pearson is director and Doctor Mehta is associate project coordinator of the Michigan Regional Drug Information Center, University Hospital, Ann Arbor.

MICHIGAN
DEPARTMENT
OF PUBLIC
HEALTH

Monthly Surveillance Report

Cases of Certain Diseases Reported To the Michigan Department of Public Health

For the Five-Week Period Ending January 1, 1971

	1970 This 5-Week Period	1969 Same 5-Week Period	1970 Total To Above Date	1969 Total Same Date	Total Cases for 1969
Rubella	129	215	3,012	4,307	4,307
Congenital Rubella Syndrome	0	—	2	—	—
Measles	36	46	1,834	401	401
Whooping Cough	8	31	195	192	192
Diphtheria	—	—	—	—	—
Mumps	1,431	517	7,825	5,215	5,215
Scarlet Fever & Strep Sore Throat	1,598	1,379	11,863	9,763	9,763
Tetanus	0	1	8	6	6
Poliomyelitis (paralytic)	0	0	1	1	1**
Hepatitis	441	343	4,594	3,360	3,360
Salmonellosis (other than S. typhi)	69	40	665	539	539
Typhoid Fever (S. typhi)	2	0	14	6	6
Shigellosis	31	15	225	300	300
Aseptic Meningitis	12	12	296	179	179
Encephalitis	13	6	155	120	120
Meningococcic Meningitis	4	11	69	114	114
H. Influenza Meningitis	10	6	61	56	56
Tuberculosis	190	198	2,006	2,141	2,108
Syphilis	371	254	3,900	4,029	4,021
Gonorrhea	1,795	1,776	20,676	19,386	19,194

Information can be supplied by the local health department on the local incidence of disease.

** corrected total (late reporting)

Maurice Reizen, M.D., Director
Michigan Department of Public Health

Which thyroid hormone preparation is best?

By Joel I. Hamburger, MD
Donald A. Meier, MD
Southfield

The ever increasing number of thyroid hormone preparations is causing confusion for many physicians. There are now five distinctly different forms, and multiple trade names for different brands of the same or similar products. It is proper, therefore, to ask if this proliferation of products is really necessary, or simply another example of Madison Avenue huxterism.

For many years desiccated thyroid hormone was the only available substance, and therapeutic results were generally satisfactory.

However, it has become increasingly evident that potency and/or absorption of these products is undependable.[1] They are assayed only in terms of iodine content, which gives no guarantee as to the concentration of metabolically active hormone. Almost monthly we encounter a patient who has been taking a desiccated thyroid preparation without clinical benefit, and for whom laboratory studies confirm the lack of metabolic activity. For this reason there has been continuing interest in better thyroid hormone preparations.

An early effort to this end was the production of thyroglobulin (PROLOID®). This product is analyzed for iodine content, and also "biologically assayed and standardized in animals to provide protection against the variability sometimes noted with USP thyroid."[2] Although raising the cost by about 50 percent, this extra step has not proved effective in assuring uniform responses to thyroglobulin. A further disadvantage is the observation that patients taking thyroglobulin, even when euthyroid, frequently have values for serum thyroxine or PBI tests within the hypothyroid range. This seems to be a consequence of a disproportionately high T_3/T_4 ratio in this product.

Once or twice yearly we are referred patients who have received progressively increasing doses of thyroglobulin until they become toxic, in a vain attempt to restore PBI values to the "normal" range.

These problems with crude thyroid hormone preparations of animal origin have given impetus to the synthesis of the active chemical compounds themselves. A pure T_3 preparation (CYTOMEL®) has been available for some time. It is uniformly effective. Because of its relatively rapid onset of action it is particularly useful in testing the suppressibility of thyroidal iodine uptake in suspected hyperthryoidism—the T_3 suppression test of Werner.[3] For maintenance of the hypothyroid patient there is a drawback of rather high cost. In addition, for patients with coexistent cardiac diseases, the greater catecholamine potentiating effect, per unit metabolic effect, is undesirable.[4] A final problem is the failure of T_3 to elevate serum thyroxine (or PBI) values to within "normal" limits.

As noted above with thyroglobulin, we regularly encounter patients made toxic by T_3 to correct a subnormal blood test. T_3 fails to elevate serum thyroxine values because it is about four times as potent as T_4, hence only one-fourth as much is required. In addition, T_3 is less well bound to carrier protein, which further reduces test values. Finally, T_3 has only three-fourths the iodine of T_4; hence for tests which depend upon measurement of iodine (PBI, BEI and T_4 by column) lower values will be obtained than would be the case with the normal patient whose thyroid hormone secretion is predominantly T_4.

More frequently employed synthetic products contain pure L-T_4 (SYNTHROID®, LETTER®). Although the normal thyroid gland secretes a mixture of T_3 and T_4, T_4 alone is completely effective in maintaining the euthyroid state even following total thyroidectomy. Furthermore, T_4 preparations are only slightly more expensive than the desiccated thyroid products, and cost about 40 percent less than T_3. Patients maintained on T_4 will have slightly higher than "normal" values for the serum thyroxine (or PBI), because the T_3 which normally produces part of the metabolic effect of thyroid hormone, but is not significantly measured by these tests, is not present; hence larger than "normal' quantities of T_4 are given. The elevation is only about 2-3 g%, and if the physician keeps this in mind he can simply adjust his

---

Doctor Hamburger and Doctor Meier are associated with the Northland Thyroid Laboratory in Southfield.

"normal range" to accommodate the values for patients taking T_4. Unfortunately, the increasing number of thyroid hormone products available makes it difficult for those not devoting full time to thyroid problems to remember the varying effects on thyroid function tests. Therefore, it would be desirable to have a product which causes serum thyroxine values within the generally accepted normal range when patients are taking usually satisfactory doses. Such products are available, and contain balance mixtures of T_4 and T_3 (EUTHYROID®, THYROLAR®). It should be emphasized that these products have no discernible or measurable advantage over pure T_4 in terms of physiologic effect. The only advantage is convenience of interpretation of test values. For this advantage the patient must pay 50 percent more than for comparable doses of T_4. This amounts to about $4.00 per year for life. If it were possible for all physicians to be completely informed about everything this additional expense would not be justifiable. Realistically, it must be admitted that these newer T_4-T_3 mixtures are likely to eliminate one source of misunderstanding about thyroid hormone administration. If widely prescribed it is likely that the price differential could be eliminated.

There is one unfortunate problem which has been created by manufacturers of the new synthetics. The same or similar colors have been employed by all, but for different dosage levels. It is therefore dangerous to assume what the dose may be for any synthetic thyroid tablet on the basis of color alone. The FDA should have either insisted upon uniform colors for the same dose level, or exclusive color selections.

One other form of thyroid hormone, recently made available deserves comment—this is D-T_4 (CHOLOXIN®). This has been introduced as a cholesterol-lowering drug, but does have the metabolic properties of thyroid hormone. Since this may produce less strain on the heart, per unit metabolic effect, it may be useful for the occasional patient with both hypothyroidism and angina pectoris.[5] Unfortunately, this product is very expensive.

In summary, unpredictable variability in potency and/or absorption of the crude thyroid preparations of animal origin make them undesirable, if not obsolete. The newer synthetic products, now available at relatively low cost, eliminate this problem. Of these the pure T_4 preparations are cheaper, but the mixtures of T_4 and T_3 have the advantage of providing "normal" serum thyroxine values in patients taking usually satisfactory doses. All things considered, it would be our opinion that the uniform use of one of the synthetic T_4-T_3 mixtures would, at relatively small increase in cost, simplify thyroid hormone administration, and its control, for most physicians.

References

1. Catz, B., Ginsburg, E., Salenger, S. Clinically inactive thyroid U.S.P. New Eng. J. 266: 136, 1962.
2. Physicians Desk Reference, 24th ed, New Jersey, Medical Economics, 1969, p. 1429.
3. Werner, S.C. A new and simple test for hyperthyroidism employing L-triiodothyronine and the 24 hour I ^{131} uptake method. Bull. N.Y. Acad. Med. 31: 137, 1955.
4. Goldberg, M. Comparative study of adrenergic potentiating properties of various thyroid analogs in man. J. Clin. Endocrinol. 2: 892, 1962.
5. Starr, P. Maintenance of normal metabolism in athyreotic patients by sodium dextrothyroxine. Acta Endocrinol. 37: 110, 1961.

Prosthetic replacement of the aortic valve:

A current assessment of operative results

By Andrew G. Morrow, MD
Bethesda

In the adult patient with clinically significant aortic stenosis or aortic regurgitation, the aortic valve is always severely deformed, frequently lacking in substance, and usually the site of dense calcification. In the past, attempts were made to restore function to such valves by debridement, commissurotomy, or other reconstructive procedures, but experience has shown that these operations are ineffective in providing lasting benefit. Thus, when operative treatment becomes necessary in the adult with acquired aortic valve disease, it must be assumed that total replacement of the valve will be necessary.

The Starr-Edwards prosthesis has been most widely utilized for aortic valve replacement, and between February 1963 and September 1967 it was employed in 175 patients undergoing valve replacement at the National Heart Institute. The early and late results of operation in these patients are summarized in the present report.

The Patients

The 175 patients were between 16 and 68 years of age (mean 47 yrs.; 136 were men and 39 women. All were distinctly symptomatic; 36 were in functional Class II (New York Heart Association Criteria), 123 in Class III, and 16 in Class IV. The patients in Class II were all severely limited by episodic angina pectoris and/or syncope. On examination, the usual physical, roentgenographic, and electrocardiographic findings associated with aortic valve disease were present. All patients were studied preoperatively by cardiac catheterization and selective angiography. Pure or predominant aortic stenosis was present in 76 patients, pure or predominant aortic regurgitation in 59 patients, and in 40 patients stenosis and regurgitation were considered of similar severity. Thirteen patients had defective aortic prostheses of other types, and 4 had aneurysms of the ascending aorta which necessitated resection or aneurysmorrhapy. Excluded from present consideration are other patients in whom aortic valve replacement was accompanied by an operation on the mitral and/or tricuspid valve.

The aortic valve was exposed during total cardiopulmonary bypass conducted during mild (30°C.) general hypothermia. The left coronary artery was perfused. The diseased valve and any residual calcific deposits in the annulus and septum were resected, and a prosthesis of suitable size inserted. The valves were those available at the time, and they had silastic poppets and bare metal struts and orifices (Models 1000 or 1200). In virtually all patients anticoagulation with warfarin was instituted in the early postoperative period and maintained thereafter.

The Results

Immediate Mortality: Twenty-four patients (14%) died during the hospital admission at which valve replacement was performed. Nine patients died in the operating room, 5 as a result of technical problems relating to placing the valve or closing the aorta; 4 other patients could never sustain an effective circulation after bypass, and one of them was found at necropsy to have severe and unrecognized mitral stenosis. Postoperatively, fatal hypotension and low output occurred in 3 patients, possibly because the prosthesis was too large for the aorta. Five patients died of uncontrollable ventricular arrhythmia, and 3 of renal failure. Cerebral hemorrhage, infected aortotomy, pulmonary consolidation, and endocarditis caused one death each.

Late Mortality: Thirty-eight of the original 175 patients (22%) have died at intervals of 3 months to 5 years after operation. In 10 patients death was sudden and unexpected, and no anatomic cause was apparent at necropsy. Ten other patients have died as the result of degeneration of the silastic ball. The remaining 18 patients died of various causes including left ventricular failure, arrhythmia, myocardial infarction, endocarditis, and hepatitis.

Thromboembolism: Since 1965, all patients with Starr-Edwards valves have been given therapeutic doses of warfarin unless a specific contraindication existed. Twenty-eight of the 113 surviving patients have had a total of 31 cerebral emboli with definite neurologic abnormalities. Twenty-five of the

---

Doctor Morrow is chief, Clinic of Surgery, National Heart Institute, Bethesda.

28 patients recovered without detectable neurologic sequelae; in 2 patients mild residual abnormality persists, and in the other moderate weakness of the arm prevents employment. A number of other patients have described brief episodes of vertigo, paresthesia, or aphasia, but none has ever had a neurologic abnormality on examination. Two patients who died suddenly and unexpectedly were found at necropsy to have coronary artery emboli.

Eight patients have experienced bleeding as the result of warfarin administration, and 2 of them with intracranial bleeding (intracerebral or subdural) died.

Symptomatic Improvement: The 113 surviving patients have been followed for periods of one to 5 years (average 34 mos.), and detailed reassessments have been made in all. Eighty of the 113 survivors (71%) are asymptomatic (Class I), while the remaining 32 experience symptoms only during unusual activity (Class II).

Hemodynamic Improvement: Postoperative cardiac catheterization has been performed in 100 patients at an average interval of 7 months postoperatively. A systolic gradient across the prosthesis was usually evident, but the average value at peak systole was only 12 mm. Hg. The left ventricular end-diastolic pressure exceeded 15 mm. Hg in 66 patients preoperatively; it fell postoperatively in all but 4 of these, and the value was greater than 15 mm. Hg in only 15 patients postoperatively. The cardiac index was usually normal both before and after operation in patients with aortic stenosis. In two-thirds of those with aortic regurgitation it was abnormally low preoperatively, and normal in all but 3 postoperatively.

Some Conclusions Concerning Aortic Valve Replacement

The immediate risk of aortic valve replacement is 10-15%, and a significant number of survivors may be expected to die later of causes directly or indirectly related to the operation or the prosthetic valve. Thus, at this time operation should only be recommended to distinctly symptomatic and severely incapacitated patients, those in whom the risk of early death without operation can reasonably be considered equal to or greater than that associated with valve replacement. Valve replacement is certainly to be avoided under all but extreme circumstances in the child or adolescent. The diagnosis of aortic stenosis and/or aortic regurgitation is readily apparent on clinical examinations, but information concerning the severity of the malformation can only be obtained by appropriate hemodynamic and angiographic studies. Such studies should be applied preoperatively in most patients, to provide assurance that symptoms are entirely or principally attributable to the defective valve, and that improvement can be expected after valve replacement. When severe stenosis or regurgitation is proved to be present in a severely symptomatic patient, operation is always recommended. Certain preoperative findings, such as prior myocardial infarction, probably indicate an increased operative risk, but at this time none constitutes an absolute contraindication to operation.

Patients who survive operation derive gratifying symptomatic improvement, and in most this is accompanied by a return of the intracardiac pressures to normal or near-normal values.

These attitudes and conclusions concerning aortic valve replacement are based almost entirely on relatively early experiences with Starr-Edwards prostheses. Early mortality can certainly be reduced by more exact intraoperative and postoperative management, and almost two-thirds of the early deaths in this series could now be avoided. Also, valves used since September 1967 have metallic poppets, which should be indestructible, and fabric covering of the orifice and struts should eliminate or greatly reduce the incidence of systemic embolization. With these valves permanent anticoagulation is presently considered unnecessary. When there is sound evidence that modifications of the operation and the prosthesis have reduced the risk of late death or disability, valve replacement can then be recommended to patients early in the course of their disease.

Perinatal Tips

By Paul M. Zavell, MD
Detroit

The following case from the files of the Wayne County Medical Society Perinatal Mortality Committee is presented as an aid in continuing education.

Maternal

This was the third pregnancy of this GIII, PII 30 y A+ white mother. Her two prior pregnancies resulted in normal living children. Because of economic and marital problems, she was seen only three times for her prenatal care; namely, the first, at two months when pregnancy was confirmed and a VDRL was drawn that was negative; the second, at six months when she had a very "bad cold" and was treated with a seven day course of tetracyclines; and the third, at eight months when she had the "flu" and she was again treated with a week course of tetracyclines. At nine months, after a rapid seven hour uncomplicated labor, she delivered a six pound, 13½ oz. white female infant. During the mother's hospital stay, she was noted to run a low grade temperature of 99 to 100° with a mild head cold. However, her CBC and chest X-rays were normal and she received no treatment.

Fetal

In the hospital the baby had an uncomplicated course except that she became jaundiced on the third day with Bilirubin of 12.0 mgm% indirect and 0.5 mgm% direct and she was noted to have developed a "stuffy" nose on the fourth day. According to routine, she was discharged home with her mother on the fifth day of life.

After being home for five additional days the mother called her pediatrician because the infant's nose cold was worse with much mucus. He treated her on the phone, conservatively, with nasal suction. However, the cold did not seem to get better so that the baby was seen in the office at three weeks of age. The physician treated the infant with antihistamines and nose drops. The mother failed to bring the baby in for a routine six week visit but did finally bring her in at two and one-half months of age with complaints of a body rash and persistence of the nose cold. The diagnosis was thought to be "milk allergy" and "Pityriasis Rosea." Treatment consisted of placing the infant on a soybean formula and reassurance about the rash. Neither the nose congestion nor

---

The author is chairman, Neo-Natal and Hospital Care Committee, Michigan Chapter, A.A.P., and is chairman of the Perinatal Mortality Study Committee of the Wayne County Medical Society.

the rash improved so that the infant was reseen at three months of age. At this time, in addition to the persistently stuffy-mucusy nose and the rash (now generalized, flat, slightly reddish, rounded, confluent and symmetrically placed) physical exam included peeling of soles and palms, generalized edema and abdominal findings of enlarged liver (5cm below RCM) and spleen (3-4cm below LCM). The infant was immediately hospitalized with a diagnosis of hepatosplenomegaly and rule out leukemia. Positive findings in the hospital were a hemoglobin of 8.2gm with 15,600 WBC, positive VDRL, positive Dark Field nasal mucus and a long bone X-ray survey consistent with congenital lues ("Irregular transverse lucency and density of metaphyseal regions with destructive lesions in left tibia and right humerus as well as multiple areas of periosteal new bone deposition"). The infant was treated daily for ten days with 100,000 u aq. penicillin G. I.M. q 12h. The liver and spleen receded in size to normal, the nose cleared completely and the rash disappeared before treatment was stopped.

Follow-Up

The mother's VDRL was re-done when the infant's diagnosis became apparent. As was expected, it was strongly positive. Because of penicillin allergy, she was treated for twenty-one days with Erythromycin 250 mgm qid. Public health was notified and contacts were located and treated. At nine months of age, a follow-up long bone X-ray on the infant revealed all osseous structure normal in appearance with no residual deformity. The infant appeared to have normal growth and development.

Perinatal Committee Comments and Tips

1) Although syphilis seemed a "thing of the past" after World War II, it has been on the rise in the U.S.A. in recent years.

2) Since syphilis can present itself in many forms, persistent and unexplained symptoms (such as stuffy nose and rash on an infant) should alert one to this possibility as a diagnosis.

3) "Head Colds" from viral causes rarely last longer than two to three weeks duration in an infant. Prolongation should alert one to another possible cause (Bacterial Rhinitis, allergy, choanal atresia, etc.).

4) Infants three months of age don't get Pityriasis Rosea.

5) All mothers should routinely have a VDRL (or similar test) when first seen in pregnancy and this should be repeated at the last prenatal visit, before delivery, or after birth of infant while in the hospital.

Viewpoints

Assistance for the Medical Assistant

By Mrs. Dessie E. Farwell
Education Chairman
Michigan State Medical Assistants Society

The American Association of Medical Assistants, Inc. states in its constitution this objective, "To provide educational services to increase the knowledge and professionalism of its members and to stimulate a feeling of fellowship and cooperation among its societies."

Working toward this goal of providing better and more educational opportunities to the members of the State of Michigan Society, we are reorganizing and expanding our Committee on Education. We have recently appointed three new chairmen to serve in the following fields:

1. Certified Medical Assistant Programs—Chairman, Mrs. Sarah M. Jackson, CMA, Detroit. This division will assist those wishing to take the certification examination offered yearly by AAMA, Inc.

2. Junior College Programs—Chairman, Mrs. Pauline M. Moore, Bay City. At the present time the Junior Colleges offer two types of courses: a. A full time day course of either one or two years duration; b. An In-Service Program for those already employed in the medical field. Assistance will be offered to the colleges in both of these fields.

3. County Chapter Programs—Chairman, Mrs. Claire E. VanDam, Benton Harbor. This program will be to assist those wishing to acquire new knowledge and skills to help them better perform their daily tasks in the doctor's office, but who do not wish to enroll in a college course. These courses will be of only four to six weeks duration.

In July 1969 the AMA House of Delegates approved the "Essentials of an Accredited Educational Program for Medical Assistants." Since that time five colleges have had their programs approved by the Council on Medical Education of the American Medical Association. We hope one of our Michigan Colleges offering a two year course in Medical Assisting will be eligible for approval in the not too distant future.

We are investigating the possibilities of establishing a Traveling Educational Symposium with the thought in mind of reaching members and non-members who do not attend our seminars or conventions.

A Mid-winter Educational Seminar will be held in Saginaw on January 31, 1971 at the Ramada Inn hosted by the Saginaw Chapter. All medical assistants are invited, and it is not necessary to be a member of the Michigan Medical Assistants Society to attend.

Doctor, why not urge your Medical Assistant to make a reservation for this meeting? We would like to meet her.

Are you on a list?

By John H. van de Leuv, MD
Oxford

(The following is reprinted, with permission, from the QUARTERLY REPORT of the American College of Emergency Physicians.)

Recently, in Detroit, Michigan, a six-year old child, with a depressed skull fracture and in semi-coma was turned away from a hospital that was listed by the police department as a major emergency facility, able to provide full coverage, twenty-four hours a day. The reason for the denial of treatment was given differently on two or more occasions. One source was quoted as saying that the hospital did not have full specialty coverage and was especially lacking in pediatric facilities. The other person was quoted as stating that the intern on duty in the emergency department could not be expected to start a blood transfusion in a child of six years.

Whatever the reason for the unfortunate incident which ended in the death of the child in an operating room of another hospital, it is neither valid nor avoidable. The hospital in question had no business being listed as a major emergency facility. The emergency department should not be left in the hands of an intern who, after all, in the state of Michigan, is not licensed to practice medicine, except under the *direct supervision of a licensed physician.*

This experience brings to light two very important points.

First, it is imperative that all hospitals be classified, on sound standards, as major emergency facilities, emergency facilities, and primary emergency facilities. This will preclude the mistake described above.

Second, the staffing of the emergency facilities and especially the first two categories should not be left in the hands of the house staff, without on-the-spot supervision by competent emergency physicians, who are able to cope with the primary care of any emergency that is brought to their department.

The classification of hospitals and the insistence on staffing of emergency departments by competent, licensed physicians should be one of the major goals of the ACEP. Too many lives depend on it!

U-M SAMA Chapter involved in variety of service projects

By Jeffrey Callen
President, U-M SAMA Chapter

The Student American Medical Association at the University of Michigan has long existed to serve the medical student, the medical school, and the surrounding community. Through the hard work of its members, we have instituted many programs.

SAMA is currently directed by a board of approximately 26 medical students who meet once a month to review the functioning of the various committees and to formulate new projects. The members at large, which comprise 50 percent of the medical school student body, are able to actively participate in the planning of any program they wish, and any medical student may choose to reap the benefits of the programs by attending them.

The largest program SAMA has organized is that of sex education. It has been in operation for four years, and has been a large success from the point of view of the medical students involved as well as the college students to whom it is directed.

Each year approximately 200 medical students participate in this community program, which has included fraternities, sororities, and dormitories on the University of Michigan and Eastern Michigan University campuses. The medical students split into groups of four to eight persons and lead a discussion which includes information on venereal disease, contraception, and the anatomical, physiological and emotional aspects of sex. The large number of medical students in this program allows for a wide dissemination of sex information on the campuses.

A drug education program has been organized similarly and deals with such subjects as abuse of barbiturates, narcotics, hallucinogens, amphetamines and alcohol.

Another local program directly benefits the medical student. Our preceptorship program allows freshman and sophomore medical students to observe the practice of private physicians in the Ann Arbor area. This program has been extremely valuable to the student, allowing him to observe the operation of a field of medicine he is interested in. Along the same lines, the national SAMA in conjunction with the Michigan State Medical Society has set up the MECO program which allows for medical student externships at hospitals throughout the State of Michigan.

The University of Michigan SAMA hosted a regional convention in April, 1970, which dealt with the topic of medical education. Its organization was unique in that it involved members of the University of Michigan Institute of Social Research trained in group dynamics, who organized role playing groups and simulation groups to open lines of communication which would suggest plans for change in medical education. Thus, the convention attempted an action-oriented approach, rather than the more traditional rehashing of problems.

SAMA usually holds one large symposium per year. Last year in conjunction with Student Health Organization we organized a symposium on the social aspects of medicine which students and physicians attended and participated in. We are now planning a weekend-long symposium on health care systems to be held in April, 1971, with national figures as speakers and physicians and students as seminar leaders. This large-scale project has tremendous educative value for all involved.

Finally, SAMA is responsible for the editing of the medical school yearbook, and shows noontime movies for the entertainment and education of medical students.

In conclusion, the University of Michigan SAMA chapter is involved in a wide range of services and is always ready to consider suggestions for more service projects. I'd like to thank the MSMS for this opportunity to inform Michigan's physicians of this chapter's SAMA programs.

National SAMA Director praises MSMS action

Harold H. Hiscock, MD, President
Michigan State Medical Society
120 West Saginaw
East Lansing, Michigan 48823

Dear Dr. Hiscock:

We read with great interest the article in the October 19 issue of *American Medical News* stating that the Michigan State Medical Society had amended its bylaws to provide for seating of delegates from the three Michigan chapters of the Student American Medical Association. We appreciate the involvement of SAMA in your Society, and I view this move as a positive step toward better communication. It would be my hope that other Societies will follow the example set by the Michigan Society and involve medical students in their activities and decisions.

Best regards.

Sincerely,
Charles C. Hewitt, Executive Director
Student American Medical Association
Flossmoor, Ill.

How far should the federal government go to guarantee health care for all people?

By C. T. Hardwick, PhD
Houghton

Historical Notes

Early Americans earned the reputation as self-reliant pioneers who were free and independent to make their own way. They were individualists who were responsible for their own economic welfare. The American government system in general provided for national defense, roads, justice, and minimal federal services. Such a system persisted while America was an agrarian economy with small cities. As we became more highly industrialized new problems of unemployment and economic suffering arose.

Beginning with the big depression of the 1930's, great demands and pressures were exerted on the federal government to provide protection and assistance to those suffering from economic deprivation or disaster.

President Roosevelt and the New Deal legislators moved with vigor into the socio-economic arena with programs to guarantee such economic assistance for farmers, unemployed, aged, sick, youth, banks, and unfortunate industries. Also the social security legislation was inaugurated to provide retirement benefits. In 1946 the Full Employment Act provided further assistance for unemployed. Other legislation provided basic help to transportation, housing, and veterans.

All of the federal dollars were demanded and expected by more and more segments of U. S. economy when trouble threatened. This was the creation of a new political economy mixing the private and public dimensions of the free enterprise economy.

Government dollars today account for twenty-five to thirty percent of total expenditures. The mixed economy is here. However, government funds can be given only to the extent that the taxing power can take it away from those who have it and give the guarantee to those who need it. There is no unlimited source of dollars, even at the federal level.

Competition for limited resources is always with us. Therefore the custom of seeking more and more dollars for more and more economic guarantees has a limited future.

At the present time, there are at least five contemporary demands for economic guarantees by federal government, namely:

1. Comprehensive Health Programs
2. No fault automobile insurance
3. Full education opportunities through college
4. Consumer protection
5. Adequate housing for everybody

Analysis of Guaranteed Health Care

Because of limited space and for convenience, this article will discuss only one question: How far should the federal government guarantee health care to all Americans?

The question of federal guarantee of the economics of health care to all Americans has many dimensions. On the one hand, the historical pattern of paying for medical expenses during the first four decades of this century rested on the individual family wage earner. Then private insurance for health protection came along with the individual at first paying premiums and later on the employer sharing or paying all of the premiums for many workers. During the current times, the proposal is made for comprehensive health care programs in which the federal government will assume payments for all those who are unable to pay. Eventually the proposal will be enlarged so that everybody will be guaranteed health care in the best hospitals by the best provider without consideration of an economic means test.

There are several implications in the current proposals to guarantee quality health care to all citizens. The movement toward such an objective involves certain assumptions, for instance that there is or soon will be sufficient hospital facilities and/or adequate physicians and para-medical personnel. Of course, the provider side of health has many limitations such as the shortage of physicians and other health care employees. So if we solve the burden of costs, we still would have troubles with inadequate professional services in many places. Furthermore, in theory, the removal of individual economic burden to pay will tend to further increase the presently heavy demand curve for health services. This has happened many times throughout the world. In general when economic burden is minimized, demand increases rapidly.

Doctor Hardwick is dean of the School of Business at Michigan Technological University, Houghton, and serves as MSMS consulting economist.

One basic question to be kept in mind, therefore, centers around the method and means we use in a mixed economy which preserves the concept of private enterprise while permitting government dollars to assist those who need and want better health care. Several propositions may help guide us in determining the right mix of private and public aspects of health care.

Proposition one:

The Federal government should not assume responsibilities for direct administration of health care but rather the federal dollars should be channeled through some private fiscal agency, such as Blue Cross and Blue Shield. This still implies review of expenditures by government agencies but preserves some private decision making.

Proposition two:

The quality of health care should be preserved for the professionals by use of *peer review* so that providers are motivated to maintain optimum quality in relation to resources available. Only the providers are the real determinants of quality health care.

Proposition three:

In the mixed economy in which government funds are used for private services, there arises the need to negotiate "fees for services." In order to preserve the independence of providers this negotiation has to be open without serious government restrictions.

Proposition four:

In a free enterprise type of mixed economy, responsibility for financial payments should rest on those able to pay before government support comes into the picture. Therefore private payments including deductibles should be woven into the payment patterns.

Proposition five:

Instead of relying too much on government bureaucracy, the mixed economy should encourage innovations in the private structure of priority health services such as creation of autonomous "foundations" related to but independent of old arrangements.

Conclusions

The mixture of the private sectors and public sectors in the health field will not be easily resolved. However, jumping to the defense of one over the other does not solve the complex issues. We must take constructive and new, bold steps to restructure the mixture to better fit the evolving situation. The conservatives will usually be in favor of protecting the private economy. The liberals will usually be in favor of enlarging the public dimensions.

In this presentation, we have suggested a pragmatic approach to encourage cooperation and coordination between the private and public so that a reasonable mix will be utilized but generally more private than public.

This is in keeping with our American heritage.

Self-reliant and self-motivated professionals will still provide better quality health care under the mixed system in which federal funds are used to support the independent and responsible providers. When there is a faith and will to build a more responsive private health system, we will find new ways. Simplistic answers will not contribute to the solution of complex problems.

Old answers will not suffice.

New solutions are demanded and we shall accept this challenge.

Medico - legal

The AMA's Citation Newsletter, prepared by the AMA Law Department, lists the following cases involving health personnel in Michigan. Persons interested in obtaining more information on individual cases may write MSMS Headquarters.

Definition of "Patient" in Mental Institution
Michigan Court of Appeals, Dec. 10, 1969

Rapist's Refusal to Be Examined by Psychiatrist Bars Appeal as "Sexual Psychopath"
Michigan Court of Appeals, June 23, 1969

"Pill" Manufacturer Liable for Necrosis of Hip Joint
D.C., Michigan Docket No. 25664, 1970

Radiologists Liable for Failure to Advise of Fracture
Michigan Court of Appeals, Feb. 25, 1970

Physician-Patient Privilege Not Waived as to Examining Patient
Michigan Court of Appeals, Feb. 25, 1970
Rehearing Denied April 17, 1970

Physician Who Reported Suspected Child Abuse Held Immune from Suit
Michigan Circuit Court, Wayne County
Docket No. 136,064, June 10, 1970

Union Restricted in Recommending Lawyers
Michigan Superior Court, March 9, 1970

CALORIES / 7 oz. Serving*

Beef Broth	22	Vegetable	68
Consommé	29	Tomato	69
Chicken with Rice	43	Cream of Asparagus	70
Chicken Gumbo	48	Cream of Chicken	76
Chicken Noodle	54	Cream of Mushroom	115
Cream of Potato	58	Green Pea	116
Chicken Vegetable	60	Cream of Shrimp (Frozen)	132
Vegetable Beef	66	Bean with Bacon	133

In planning high or low calorie diets, Campbell's more than 50 different soups offer you a wide choice. And, most of Campbell's Soups contain a wide variety of ingredients that can serve as supplementary sources of many essential nutrients.

* From "Nutritive Composition of Campbell's Products" which gives values of important nutritive constituents of all Campbell's Products. For your copy, write to Campbell Soup Company, Dept. 536, Camden, New Jersey 08101.

There's a soup
for almost every patient and diet
..for every meal
and, it's made by Campbell

When the stage is set for diarrhea...

Diarrhea . . . thwarted once again!

Time after time . . . just when plans seem sure to be shattered . . . the effective and prompt action of Lomotil comes to the rescue.

Here is an antidiarrheal with a performance record that few can challenge. A versatile actor, Lomotil stars in the treatment of diarrhea associated with gastroenteritis, irritable bowel, functional hypermotility, regional enteritis, malabsorption syndrome, drugs, acute infections, ulcerative colitis and food poisoning. In addition, it plays a major role in the control of intestinal transit time in patients with ileostomies and colostomies and of the diarrhea occurring after gastric surgery.

So . . . when Lomotil is in the cast (even in a supporting role), it's curtains for diarrhea!

Lomotil®

TABLETS/LIQUID

Each tablet and each 5 cc. of liquid contain:
Diphenoxylate hydrochloride . . . 2.5 mg.
(Warning: may be habit-forming)
Atropine sulfate . . . . 0.025 mg.

Saves the Show

Warnings: Lomotil should be used with caution in patients taking barbiturates and, if not contraindicated, in patients with cirrhosis, advanced liver disease or impaired liver function.

Precautions: Lomotil is a federally exempt narcotic with theoretically possible addictive potential at high dosage; this is not ordinarily a clinical problem. Use Lomotil with considerable caution in patients receiving addicting drugs. Recommended dosages should not be exceeded, and medication should be

kept out of reach of children. Signs of accidental overdosage may include severe respiratory depression, flushing, lethargy or coma, hypotonic reflexes, nystagmus, pinpoint pupils, tachycardia; continuous observation is necessary. The subtherapeutic amount of atropine sulfate is added to discourage deliberate overdosage.

Adverse Reactions: Side effects reported with Lomotil therapy include nausea, sedation, dizziness, vomiting, pruritus, restlessness, abdominal discomfort, headache, angioneurotic edema, giant urticaria, lethargy, anorexia, numbness of the extremities, atropine effects, swelling of the gums, euphoria, depression and malaise.

Overdosage: The medication should be kept out of reach of children since accidental overdosage may cause severe, even fatal, respiratory depression.

Dosage: The recommended initial daily dosages, given in divided doses until diarrhea is controlled, are as follows:

Children:

3-6 mo.	½ tsp.* t.i.d. (3 mg.)
6-12 mo.	½ tsp. q.i.d. (4 mg.)
1-2 yr.	½ tsp. 5 times daily (5 mg.)
2-5 yr.	1 tsp. t.i.d. (6 mg.)
5-8 yr.	1 tsp. q.i.d. (8 mg.)
8-12 yr.	1 tsp. 5 times daily (10 mg.)
Adults:	2 tsp. 5 times daily (20 mg.) or 2 tablets q.i.d.

*Based on 4 cc. per teaspoonful.

Use of Lomotil is not recommended in infants less than 3 months of age.

Maintenance dosage may be as low as one-fourth the initial daily dosage.

SEARLE
Research in the Service of Medicine
G. D. Searle & Co., Chicago, Illinois 60680

Nothing new about Synirin other than ...it's a stable, uncoated, fast disintegrating tablet of aspirin with pentobarbital potentiating the aspirin analgesia.

Synirin®

ASPIRIN 5 GR.—PENTOBARBITAL 1/8 GR.

ETHICAL ANALGESIA (economical if prescribed in 100 units with privilege of refills)

PRESCRIBING INFORMATION: To relieve tension headaches and arthritic pains, 2 tablets q 4 h. Aspirin and pentobarbital begin their action promptly, continuing for about 4 hours. The small pentobarbital content gives no perceptible sedation. Pentobarbital is destroyed by the body and there is no accumulation. Synirin will supply any aspirin therapy with equal safety. Use aspirin with caution in peptic ulcer.

EACH UNCOATED TABLET CONTAINS:

Aspirin ....325 mg. (5 gr.)
Pentobarbital* ....8 mg. (1/8 gr.)

*May be habit forming.

Federal law prohibits dispensing without prescription

DISPENSED IN BOTTLES OF 100 AND 1000 TABLETS

WILLIAM P. POYTHRESS & COMPANY, INC.
RICHMOND, VIRGINIA 23261
Manufacturers of Ethical Pharmaceuticals Since 1856

A clinical supply of this new aspirin formulation may be requested.

Your opinion please

How can physicians—especially young physicians—be encouraged to practice in the inner city or rural areas?

Lewis F. Sandel, MD
Alma

The following statements are impressions gained from recent experiences in a) medical school 1962-66, b) Internship 1966-67, c) military 1967-69, and d) General Practice in a small city 1969-70. The advantages of being away from a metropolitan area so far concern less travel time to and from work, more hospital privileges, peer respect, local non-medical professional respect, and a healthier pace of life *sans* the 24 hour rush.

Emphasis and interest must be maintained from the beginning of medical school. Pseudo General Practice divisions will not sway students if faculty, residents, and interns continue to undermine the LMD. The student who wishes to enter rural or inner city practice must be recognized and encouraged.

Preceptorships with GP's taking a more active role must be made available in greater numbers. Postgraduate training must be realistically limited to a maximum of two years. A good background of emergency work plus out-patient and essential specialty training may be obtained in this amount of time. A three year Family Practice Board will *NOT* entice a greater percentage of American-born and American-trained students after graduation.

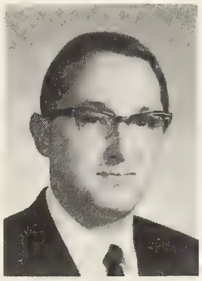
Especially after interning and two years of military service, an additional two years in residency is wasteful. A valid offering would be to exchange two years of military for rural or inner city practice. This might very well keep some individuals in the area.

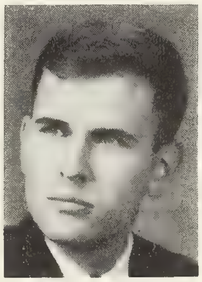
A number of practice factors would be attractive to graduates. Hospital privileges are better in rural areas. (inner city?) This is especially true in OB, newborn care, and minor surgery. More bed space and individual consideration make this so.

The rural and inner city communities would do well to attract two to four graduates from the same class or at the same time. Graduates would feel more security in practice either with or in the same geographical area as other physicians whose practice is compatible with theirs. If two or more graduates find a location with adequate facilities, and a town willing to at least partially and on a temporary basis subsidize physicians through loans or salaries, then a greater eagerness to practice away from the MECCA would be forthcoming. Also any wives involved might feel more comfortable with peers.

A link to specialty or academic centers is present in many areas through postgrad programs. An enthusiastic medical complex with consultants available by telephone would help the confidence of the rural or inner city physician. Why not a telephone network and listing or available phone consultants in large cities and medical schools? Further, perhaps some form of helicopter aero-evacuation network could be provided for those rare cases which need super-specialized care. Again this would provide a necessary link to needed medical personnel.

Doctor Nigg


Doctor Payne


Doctor Sandel

Doctor Hockstad

A final word. Students fear being a GP in the face of coming government control. The impression I have gained from talking with current medical students is that large city government practice will leave the GP a disappointed individual. A rural community which can finance a fee-for-service program in its own county may attract those of us who abhor strict salaries and practice methods which we have seen in the military. This should be feasible for outpatient care.

Thomas C. Payne, MD
Lansing

Young physicians can be best encouraged to practice in the rural and inner city areas by having contact with the physicians who are already practicing in these areas. These physicians, because of their commitment, are a living testimony to this type of practice.

A meaningful program of active recruitment on the part of these practicing physicians could not help but interest the young physician. These recruiting physicians should meet with medical students, interns, and residents and discuss the advantages afforded by their type of practice. The crux of the recruiting should be a preceptor type program where the young practitioners could serve for a limited time, such as two weeks in the summer in a practicing doctor's office. Bringing the young physician to the front would be by far the most helpful step in the recruitment process.

Herbert Lee Nigg, MD
Caro

A visiting orthopedic resident from Pretoria, South Africa stated that in his country all MD's must have two years in general practice before starting a residency in any of the specialties. Thus, although the rural areas in South Africa are not as modern and attractive as their American counterparts, many physicians remain in the areas and others return after gaining their specialty certification.

Scattered throughout Michigan are many small community hospitals with excellent facilities and a shortage of doctors. Once acquainted with these facilities and aware of the fact that 99 percent or more of the work is done in the community, the newcomer might also begin to feel superior to the city doctor and his city facilities.

Candidates for rural practice could also be informed as to the economic situation of most rural doctors. That is, single or group practice is probably better financially than similar set-ups in the city. Although the hours are longer, there is much less time spent in non-professional, non-pay activities such as driving, parking, meetings, etc.

(Continued on Page 136)

Brief Summary of Prescribing Information— 9-9/22/69. For complete information consult Official Package Circular.
Indications: Essential hypertension. Use cautiously in patients with renal insufficiency, particularly if they are digitalized.
Contraindications: Anuria, oliguria, active peptic ulceration, ulcerative colitis, severe depression or hypersensitivity to its components contraindicates the use of Salutensin.
Warnings: Small-bowel lesions (obstruction, hemorrhage, perforation and death) have occurred during therapy with enteric-coated formulations containing potassium, with or without thiazides. Such potassium formulations should be used with Salutensin only when indicated and should be discontinued immediately if abdominal pain, distension, nausea, vomiting or gastrointestinal bleeding occurs. Use cautiously, and only when deemed essential, in fertile, pregnant or lactating patients. *Use in Pregnancy:* Thiazides cross the placenta and can cause fetal or neonatal hyperbilirubinemia, thrombocytopenia, altered carbohydrate metabolism and possibly electrolyte disturbances. Fatal reactions may occur with reserpine during electroshock therapy; discontinue Salutensin 2 weeks before such therapy. Increased respiratory secretions, nasal congestion, cyanosis and anorexia may occur in infants born to reserpine-treated mothers.
Precautions: Azotemia, hypochloremia, hyponatremia, hypochloremic alkalosis and hypokaliemia (especially with hepatic cirrhosis and corticosteroid therapy) may occur, particularly with pre-existing vomiting and diarrhea. Potassium loss or protoveratrine A may cause digitalis intoxication. ***Potassium loss responds to potassium-rich foods, potassium chloride or, if necessary, discontinuation of therapy. Stop therapy if protoveratrine A induces digitalis intoxication.*** Serum ammonia elevation may precipitate coma in precomatose hepatic cirrhotics. Discontinue therapy 2 weeks before surgery or if myocardial irritability, progressive azotemia or severe depression occur. Exercise caution in patients with chronic uremia, angina pectoris, coronary thrombosis or extensive cerebral vascular disease *or bronchial asthma* and in those with a history of peptic ulceration or bronchial asthma; in post-sympathectomy patients; in patients on quinidine; and in patients with gallstones, in whom biliary colic may occur. Patients who have diabetes mellitus or who are suspected of being prediabetic should be kept under close observation if treated with this agent.
Adverse Reactions: Hydroflumethiazide: Skin rashes (including exfoliative dermatitis), skin photosensitivity, urticaria, necrotizing angiitis, xanthopsia, granulocytopenia, aplastic anemia, orthostatic hypotension (potentiated with alcohol, barbiturates or narcotics), allergic glomerulonephritis, acute pancreatitis, liver involvement (intrahepatic cholestatic jaundice), purpura plus or minus thrombocytopenia, hyperuricemia, hyperglycemia, glycosuria, malaise, weakness, dizziness, fatigue, paresthesias, muscle cramps, skin rash, epigastric distress, vomiting, diarrhea and constipation. *Reserpine:* Depression, peptic ulceration, diarrhea, Parkinsonism, nasal stuffiness, dryness of the mouth, weight gain, impotence or decreased libido, conjunctival injection, dull sensorium, deafness, glaucoma, uveitis, optic atrophy, and, with overdosage, agitation, insomnia and nightmares. ***Protoveratrine A:*** Nausea, vomiting, cardiac arrhythmia, prostration, blurring vision, mental confusion, excessive hypotension and bradycardia. (Treat bradycardia with atropine and hypotension with vasopressors.)
Usual Dose: 1 tablet b.i.d.
Supplied: Bottles of 60, 600, and 1000 scored 50 mg. tablets.

Salutensin®

hydroflumethiazide, 50 mg./reserpine, 0.125 mg. protoveratrine A, 0.2 mg.

BRISTOL
BRISTOL LABORATORIES
Division of Bristol-Myers Company
Syracuse, New York 13201

The antihypertensive therapy that is easy to live with.*

When successive blood pressure readings confirm essential hypertension, consider Salutensin for:

Easy-to-live-with control. Gradual reduction of blood pressure leading to decisive, comfortable control is the common clinical response.

*Salutensin is usually well-tolerated (however, serious side effects can occur; see adjacent column for brief summary of prescribing information).

Easy-to-live with dosage. Two tablets a day usually achieves control. One to two tablets a day often maintains control without need for additional antihypertensive agents.

Easy-to-live with cost of therapy. The one to two tablets a day maintenance dose makes Salutensin economical to stay with. Important, because long-term control calls for long-term therapy.

Salutensin®

hydroflumethiazide, 50 mg./reserpine, 0.125 mg. protoveratrine A, 0.2 mg.

A direct contradiction to the above is the Blue Shield variable fee plan which classifies by geographical and population areas "ABCD." Everyone but A is dissatisfied since it is the general belief (true or not) that A doctors are paid more than B doctors and so on. Since C and D area doctors must do all of their own work with no interns or residents to help on the many chores and checks of pre- and post-op cases, coronary care units, etc., the fee schedule should be reversed or at least equalized. Such a change would also affect Medicare and Medicaid fees which are frequently based on the Blue Shield schedule. This in turn would make rural areas more attractive.

Raymond L. Hockstad, MD
Escanaba

Practicing in a rural community in the Upper Peninsula, I am considerably more familiar with the problem of attracting physicians to rural areas than I am to inner city areas. I will, therefore, comment directly upon the rural area problem and will assume that what I have to say will have some bearing upon the other problem also.

I am convinced that the only way to effectively attract physicians to a rural practice is to expose potential physicians during their training to such practices. It is common knowledge and only logical that the majority of physicians tend to practice in areas that they are familiar with. Most physicians, thus, gravitate toward large urban practices because the majority of them come from large urban areas and/or every physician takes nearly 100 per cent of his training undergraduate, medical, internship, and specialty, in large urban centers and for these two reasons is most certainly most familiar only with urban areas.

HPI

HOSPITAL PLANNING INC.
ALCO UNIVERSAL BUILDING
EAST LANSING, MICH. 48823

Physicians Clinics Groups Hospitals

We serve the hospital and medical field by recruitment of professional personnel for client organizations who need capable general practitioners and medical specialists. As management and personnel consultants we are familiar with the leading clinics and hospitals as well as the best of the smaller medical groups in the Great Lakes Region.

Placements include physicians just completing training as well as men who have been in practice for some time but desire a change in geography or wish to join a group or clinic.

Physicians of all disciplines are needed now. Mail your resume including desired objectives in confidence to Art Lepinot. No financial obligation to the physician.

Telephone (517) 332-1333

The problem then is not so much how do we attract physicians to rural areas but rather how do we acquaint medical students and young physicians in training with rural practices. Fortunately, this is not a difficult problem if proper cooperation between the Michigan State Medical Society, the Medical Schools, the SAMA, and the government can be properly harnessed and directed. There are already two programs that need only to be more fully developed in order to acquaint these physicians in training with rural practices. These programs are:

1) The SAMA program for externships during the freshman and sophomore years with physicians in rural practices during their summer vacation. Through such externships, the student, very early in his medical training develops a familiarity with rural practices and very close association with actual practitioners in active rural practice. Nothing could more firmly interest a student in practicing in a rural area than such early contact.

2) All Michigan medical schools currently now have a senior elective program that allows all senior students at least one quarter during which they may partake in a preceptorship program with physicians in rural practices. Through such a program, a well trained and knowledgeable medical student actively participates in a rural practice. The student, perhaps, for the first time is able to appreciate the tremendous opportunities and challenges of practice in a rural area. The student also becomes aware firsthand of the many advantages available to such physicians that are not available to those practicing in large urban areas.

As I stated above, I feel that simply through nuturing and developing these already existing programs a great deal can be done toward interesting physicians in training in ultimately practicing in rural areas. One much more complicated problem that I believe ultimately must be adequately solved is that of developing efficient practical programs in rural areas able to provide the area with a comprehensive health care plan through adequate facilities and adequate representation of various specialties as needed for each area. With an adequate comprehensive health care program in a rural area and with adequate exposure to these programs soon the next question will be how do we get physicians back to large urban areas.

County societies

Drug abuse therapy topic of I-MMS

Members of the Ionia-Montcalm Medical Society heard a talk on therapy and rehabilitation of the heroin addict at their November program in Greenville. The speaker was Walter D. Meester, MD, director of the Research Department of Blodgett Hospital, Grand Rapids.

Berrien doctors donate funds to CHP

The progress of the Southwestern Michigan Comprehensive Health Planning Association, Inc., is continuing, due in part, to help from the Berrien County Medical Society.

At a recent meeting, the medical society voted to give a requested four dollars per member ($436 total) from its general fund to the CHP association. The funds, with those donated by other organizations, enabled the Association to receive matching state and federal funds.

Use blood wisely— advice to Kent physicians

Kent County physicians were advised at a recent meeting to make better and more economical use of blood to avert a severe shortage. Harold A. Oberman, MD, professor of pathology at the University of Michigan, said more patients could be treated with the same amount of blood if doctors would order only that part, or component, of the blood actually needed. Fifteen of 22 persons were present at the meeting to receive special recognition for voluntarily donating a gallon of blood or more since mid-1967 at the Michigan Community Blood Center in Grand Rapids.

Jackson society again printing bulletin

After an editorial lapse of several years, the Jackson County Medical Society has again begun to publish a bulletin, which is proposed as a monthly. Editor-in-chief of the new bulletin is J. H. Ahronheim, MD, with co-editors E. W. Adams, MD; C. T. Celis, MD; B. M. Daly, MD; R. C. Deming, MD; H. Kallet, MD; B. M. Murphy, MD; S. P. Oleksy, MD, and A. Y. Zarzour, MD. Managing editors are J. B. Holst and Sam Sugar.

Noludar® 300
(methyprylon)
one capsule
for the rest
of the night

Before prescribing, please consult complete product information, a summary of which follows:
INDICATION: Relief of insomnia of varied etiology.
CONTRAINDICATIONS: Patients with known hypersensitivity to the drug.
WARNINGS: Caution patients about combined effects with alcohol and other CNS depressants. Caution against hazardous occupations requiring complete mental alertness, such as operating machinery or driving a motor vehicle shortly after ingesting the drug.
Physical and Psychological Dependence: Physical and psychological dependence rarely reported. If withdrawal symptoms do occur they may resemble those associated with withdrawal of barbiturates and should be treated in the same fashion. Use caution in administering to individuals known to be addiction-prone or those whose history suggests they may increase the dosage on their own initiative. Repeat prescriptions should be under adequate medical supervision.
Usage in Pregnancy: Weigh potential benefits in pregnancy, during lactation, or in women of childbearing age against possible hazards to mother and child.
PRECAUTIONS: If sleeplessness is pain-related, an analgesic should also be prescribed. Perform periodic blood counts if used repeatedly or over prolonged periods. Total daily intake should not exceed 400 mg, as greater amounts do not significantly increase hypnotic benefits.
ADVERSE REACTIONS: At recommended dosages, there have been rare occurrences of morning drowsiness, dizziness, mild to moderate gastric upset (including diarrhea, esophagitis, nausea and vomiting), headache, paradoxical excitation and skin rash. There have been a very few isolated reports of neutropenia and thrombocytopenia; however, the evidence does not establish that these reactions are related to the drug.

ROCHE Roche
LABORATORIES
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

MSMS news

Michigan Medicine articles the object of much attention

Two articles which have recently been published in the scientific pages of *Michigan Medicine* have received extensive attention throughout Michigan and even out-of-state.

The Journal of the Iowa Medical Society carried a two-page editorial recently paraphrasing and reporting the bulk of the article, "Early Postoperative Discharge of Patients," by Paul T. Lahti, MD, Royal Oak, which first appeared in the September issue of *Michigan Medicine*.

The article, "Mercury, Fish and Human Health," which appeared in the October issue of *Michigan Medicine*, has been widely quoted, excerpted, reprinted and used as the basis for interviews of its authors. They are Thomas Eyl, MD, St. Clair, primary author, and Maurice S. Reizen, MD, director of the Michigan Department of Public Health, and Kenneth Wilcox, MD, chief of the Bureau of Laboratories, Michigan Department of Public Health.

Newspaper stories about the article appeared in the *Detroit News, Port Huron Times Herald, Detroit Free Press, Macomb Daily and Community News*. An abstract of the article was published as a "Clin-Alert" by the Science Editors, Inc., of Louisville, Ky.

Requests for reprints and/or information have been received by Doctor Eyl from 21 other sources, including county health departments; the Michigan Governor's Task Force on Mercury; private citizens, physicians and professors in several states and Canada; several publications; the Ontario Department of Public Health, and the American Museum of Natural History.

The response to his original article has led to Doctor Eyl's authoring an additional article in *Modern Medicine*, and preparing an editorial for a future issue of the *Journal of the American Medical Association*.

Michigan Mediscene

Feb. 5-7—Michigan Physical Therapists meeting on communications, Kellogg Center, East Lansing, contact: George Andrews, RPT, Wayne State University, 645 Mullett, Detroit, 48226

Feb. 7—Michigan Academy of General Practice, board meeting, 2 p.m., MSMS Headquarters, contact: Mrs. Rita Lewis, executive secretary, Michigan Academy of General Practice, 17421 Telegraph Road, Suite 112, Detroit, 48219

Feb. 7-12—15th Annual Midwinter Medical Conference, a general medical and surgical meeting for physicians in Michigan, Wisconsin, Ohio and Illinois, contact: Joel Clay, MD, 263 S. Gratiot Ave., Mt. Clemens, 48043

Feb. 10—State Board of Registration in Medicine, board meeting, MSMS Headquarters, contact: John Wellman, MD, Michigan Board of Registration in Medicine, Michigan Department of Licensing and Regulation, 1033 S. Washington Ave., Lansing

March 10—MSMS Council, MSMS Headquarters, East Lansing, 9:30 a.m., contact: Warren F. Tryloff, MSMS director

March 23—Fourth Annual Legislative Day, Woman's Auxiliary to MSMS, all-day, Olds Plaza Hotel, Lansing, contact: Mrs. Eli Igna, 584 Lakeland, Grosse Pointe, 48236

April 14-15—10th Annual Michigan Conference on Maternal and Perinatal Welfare, Olds Plaza Hotel, Lansing, contact: Miss Helen Schulte, MSMS Headquarters

April 19-21—Clinical Pharmacology with Emphasis on Newer Drugs, American College of Physicians, University of Michigan Medical School, Ann Arbor, contact: Edward A. Carr, MD, director

April 21—MSMS Council, MSMS Headquarters, East Lansing, 9:30 a.m., contact: Warren F. Tryloff, MSMS director

April 22—Sixth Annual MSMS Conference on Medical Aspects of High School Sports, Kellogg Center, MSU, East Lansing, 9 a.m., contact: James Feurig, MD, Olin Health Center, MSU, East Lansing, 48823

April 27-28—Spring Mental Health meeting, sponsored by Michigan Society for Mental Health, MSU College of Human Medicine, Department of Psychiatry and Continuing Education Service, at Kellogg Center, MSU; contact: Harold Drain, PhD, Department of Psychiatry, MSU

April 28-29—Spring Conference of the Woman's Auxiliary to MSMS, Sheraton Motor Inn, Pontiac, contact: Mrs. F. P. Rhoades, 272 Ashland Ave., Detroit, 48215

April 29-May 1—Annual Scientific Sessions and Heart Days, Michigan Heart Association, Cobo Hall and the Pontchartrain Hotel, Detroit, contact: David Ballinger, MHA director of field services, 13100 Puritan, Detroit 48227

April 30-May 2—Annual meeting, Michigan State Medical Assistants Society, Weber's Inn, Weber's Motor Inn, Ann Arbor

May 10-15—Michigan Hospital Week

May 19-21—Michigan Public Health Association annual meeting, Pantlind Hotel, Grand Rapids, contact: William Swanson, executive director, Michigan Public Health Association, 403 Seymour, Lansing, 48914

May 21-23—Michigan Kidney Foundation annual and educational meeting, Kellogg Center, East Lansing, contact: Martin Jones, MD, 2909 E. Grand River, Lansing

May 22-23—Michigan Society of Medical Technologists, annual and educational meeting, Kellogg Center, East Lansing, contact: Robert Brooks, School of Medical Technology, MSU, East Lansing, 48823

May 24-28—Clinical Endocrinology: Physiological Basis for Current Diagnostic and Therapeutic Procedures, American College of Physicians, U-M Medical Center, Ann Arbor, contact: Jerome W. Conn, MD, course director

May 26—MSMS Council, MSMS Headquarters, East Lansing, 9:30 a.m., contact: Warren F. Tryloff, MSMS director

New Section of Solid Waste Management in operation in state health department

By Maurice S. Reizen, MD
Lansing

The Engineering Division of the Michigan Department of Public Health announced as of July, 1970, there has been created a new Section of Solid Waste Management under the direction of Fred Kellow, chief of the section. The section will be staffed to provide regional consultants and inspection personnel and will enable closer cooperation, surveillance, and consultation with local health departments, local governments, planning officials, industry, and private enterprise as their activities relate to the total field of solid waste management and insect and rodent control. The primary responsibility of the unit will provide the enforcement program as required under the provisions of Act 87, Public Acts of 1965, the licensing of solid waste disposal facilities; with secondary duties to provide the consultation in the broader field of solid waste management including storage handling and disposal.

Six districts and regions have been developed for the program. Each district was designed to cover one or more of the state's planning and development regions to enable a closer working relationship with those agencies. Region I comprised of Districts 1 and 2 will be under the supervision of an engineer, a position which is presently vacant. The engineer will have the direct responsibility for District I covering the metropolitan counties and provide supervision of Mr. Rod Mosier, an environmental sanitarian, who will be responsible for District 2, which includes the counties surrounding the metropolitan area.

Region II comprised of Districts 3, 4, and 5 will be under the supervision of Mr. Richard Hadfield, registered sanitarian. He will have direct responsibility for District 4, the northwest counties, and presently is responsible for District 3, the southwest counties of the lower peninsula where we have a position vacancy. Mr. Larry Thornton, an environmental sanitarian will be directly responsible to Mr. Hadfield and carry the district responsibilities for number 5, the northeast counties of the lower peninsula.

Region III which includes all of District 6 will cover the upper peninsula and will be under the direct supervision of Mr. Cletus Courchaine, district engineer of the Michigan Department of Health of the Engineering Division's regional office in Escanaba. A position has been established to serve the upper peninsula office, however, it is at present vacant.

The insect and rodent control consultation services will be provided by Mr. Al Therrien. He will work in conjunction with the solid waste management activities, and provide his consultation work on a state wide basis.

The Section of Solid Waste Management is also involved in the development of a state plan for Michigan. This plan is designed to provide background on current legislation involving various aspects of solid waste management and to develop some guide lines to be used in determining the future needs for the state as a whole. It is anticipated the finished document will be available some time during the latter part of 1971.

A request for assistance in the area of solid waste management may be directed through the local health department or to the Department of Public Health.

Doctor Reizen is director of the Michigan Department of Public Health.

Dr. Sweeny details AMA actions on Michigan proposals

The MSMS Council is studying an extensive report from the MSMS delegation about the actions of the AMA House of Delegates in Boston.

The report, made by Donald N. Sweeny, Jr., MD, chairman of the Michigan delegation, discussed AMA action on Michigan resolutions and on other matters.

The MSMS delegation did very well with six resolutions that it introduced and supported:

Resolution 5 Objection to Reimbursement of Chiropractors in Federally Funded Health Programs (Passed)

Resolution 37 Mediation of Physician-Hospital Disputes (Referred)

Resolution 38 Coordination of Governmental Medical Care Programs (Passed & Referred)

Resolution 39 AMA not to be Involved in Establishment of any National Fee Schedule (Passed)

Resolution 40 AMA Clinical Meeting to Avoid Thanksgiving Weekend in the Future (Rejected)

Resolution 59 Representation of the American College of Emergency Physicians on the Commission of Emergency Medical Services of the AMA (Referred)

Doctor Sweeny explained to The MSMS Council that, "a new class of membership of a direct type (without the necessity of going through the constituent state or county society when not available) was created for interns, residents, physicians of the Veterans Administration, Public Health Service, and over-seas service personnel. The Council on Amendments to the Constitution and By-Laws, was directed to prepare the proper language for this new classification of membership for the June Convention."

The AMA House, Doctor Sweeny said, "took cognizance of the importance of granting proper hearings to every physician involved in a hearing which reviews any of his activities. This has been an important item of business of the MSMS Judicial Commission. At the AMA House of Delegates the complexities became obvious and indicated the need for caution in writing rules in cement. The problem was referred to the AMA Judicial Council and we are proud to report that because of testimony given in open hearings by the Michigan Delegation on the subject, MSMS has been asked to prepare a comprehensive report for the AMA Judicial Council and to present it at a hearing of that body in the future."

Strong opposition was voiced by the AMA House to chiropractic as an unscientific cult, and it was voted to urge Congress to exclude chiropractors from all federally-assisted programs. This action was stimulated by the Michigan resolution on this matter.

Spearheaded by an excellent resolution and discussion by Harold F. Falls, MD, Ann Arbor, the AMA House of Delegates voiced opposition to the inclusion under Medicare of the services of optometrists when these services are considered to be physicians' services. Doctor Falls made a strong plea that other areas of medical care be vigilant when "non-physicians' services might be labeled physicians' services for reason of payment."

The Michigan resolution about mediation of physician-hospital disputes, Doctor Sweeny said, "was so changed and watered down by the Reference Committee that the importance of not losing control over these matters was emphasized to the House by Doctor James Danforth, Detroit. The matter was compromised by reference to the Board of Trustees and the Michigan Delegation will present direct testimony to this body before it writes its report for the June, 1971, meeting."

Realistic ways of financing medical education was the subject of a resolution and a long discussion before a Reference Committee. The Michigan Delegation expressed doubt as to the realism of the present AMA plan of student loans. This material was sent to the AMA Board of Trustees and the Michigan Delegation recommended that a position paper from MSMS be promptly provided and sent to the AMA.

A reference committee urged adoption of a new statement about the "scope, objectives and functions of occupational health programs but the Michigan delegates contended the changes were improper." Doctor Sweeny reported that, "The Michigan delegation managed by a long and bitter floor fight to get this report referred back to the Council on Occupational Health. Members of the Council were incensed that their efforts at invading the field of the private practitioner should be thus thwarted." Both Doctor Engelke and Doctor Sweeny have been invited to Chicago to explain Michigan's position in the matter. The report will be presented again to the House of Delegates in June, 1971.

In response to a Michigan resolution outlining the present "non-plan" of the various overlapping health care programs funded by the local, state and federal governments, (OEO, Housing and Urban Development, RMP, etc.) the serious concern for the waste of public funds was emphasized by the AMA House.

A
BUILDING BLOCK
TO RECOVERY

"Welcome back, Ann"
As adjunctive therapy
DOUBLE STRENGTH
Orenzyme®
Bitabs
One tablet q.i.d.
Trypsin: 100,000 N.F. Units, Chymotrypsin: 8,000 N.F. Units; equivalent in tryptic activity to 40 mg. of N.F. trypsin
Reduces swelling
Hastens healing
Speeds recovery
trauma
One tablet q.i.d.

Indications: When used as adjunctive therapy for the rapid resolution of inflammation and edema, good results have been obtained in:
☐ Accidental Trauma ☐ Postoperative Tissue Reactions.
Other conventional measures of treatment should be used as indicated. In infection, appropriate anti-infective therapy should be given.
Contraindications: ORENZYME BITABS should not be given to patients with a known sensitivity to trypsin or chymotrypsin.
Precautions: It should be used with caution in patients with abnormality of the blood clotting mechanism such as hemophilia, or with severe hepatic or renal disease. Safe use in pregnancy has not been established.
Adverse Reactions: Adverse reactions with ORENZYME have been reported infrequently. Reports include allergic manifestations (rash, urticaria, itching), gastrointestinal upset and increased speed of dissolution of animal-origin surgical sutures. There have been isolated reports of anaphylactic shock, albuminuria and hematuria. Increased tendency to bleed has also been reported but, in controlled studies, it has been seen with equal incidence in placebo-treated groups. (See Precautions.) It is recommended that if side effects occur medication be discontinued.
Dosage: One tablet q.i.d.

THE NATIONAL DRUG COMPANY
DIVISION OF RICHARDSON-MERRELL INC.
PHILADELPHIA, PENNSYLVANIA 19144
TRADEMARK: BITABS U S PATENT NO 3,004,893 9/70 0-009A 161

Orenzyme® Bitabs

Trypsin: 100,000 N.F. Units, Chymotrypsin: 8,000 N.F. Units; equivalent in tryptic activity to 40 mg. of N.F. trypsin

The causes of vaginitis are multiple

Trichomonads . . . monilia . . . bacteria

You can depend on AVC—comprehensive therapy that combats all three major vaginal pathogens, alone or in combination.

AVC

Cream (aminacrine hydrochloride 0.2%, sulfanilamide 15.0%, allantoin 2.0%)

Suppositories (aminacrine hydrochloride 0.014 Gm., sulfanilamide 1.05 Gm., allantoin 0.14 Gm.)

Contraindications: Known sensitivity to sulfonamides.

Precautions/Adverse Reactions: The usual precautions for topical and systemic sulfonamides should be observed because of the possibility of absorption. Burning, increased local discomfort, skin rash, urticaria or other manifestations of sulfonamide toxicity are reasons to discontinue treatment.

Dosage: One applicatorful or one suppository intravaginally once or twice daily.

Supplied: Cream—Four-ounce tube with or without applicator. Suppositories—Box of 12 with applicator.

TRADEMARK: AVC AV-104 2/71 Y-149

THE NATIONAL DRUG COMPANY
DIVISION OF RICHARDSON MERRELL INC
PHILADELPHIA, PENNSYLVANIA 19144

AVC
The treatment is singular

The concert was just underway,
When to the conductor's dismay
Cramps and diarrhea,
Did so quickly appear,
The maestro no longer could stay.

Because diarrhea with cramping, nausea, and painful straining can strike at the most inopportune time, it takes a comprehensive agent to treat the total diarrheal syndrome and help get the patient back on the job. That's why so many physicians rely on Donnagel, especially during the fall and winter months when "flu" and viral gastroenteritis usually hit their peak.

Donnagel is much more than just a simple kaolin-pectin combination. It also contains the belladonna alkaloids to calm GI hypermotility and help relieve the distressing discomforts which so often accompany diarrhea. Certainly it's less expensive and more convenient than taking two medications. And the dosage is lower too. Available in the handy 4-oz. plastic bottle at pharmacies everywhere on your prescription or recommendation.

Schuberts Unfinished Symphony
A-H ROBINS
nnagel

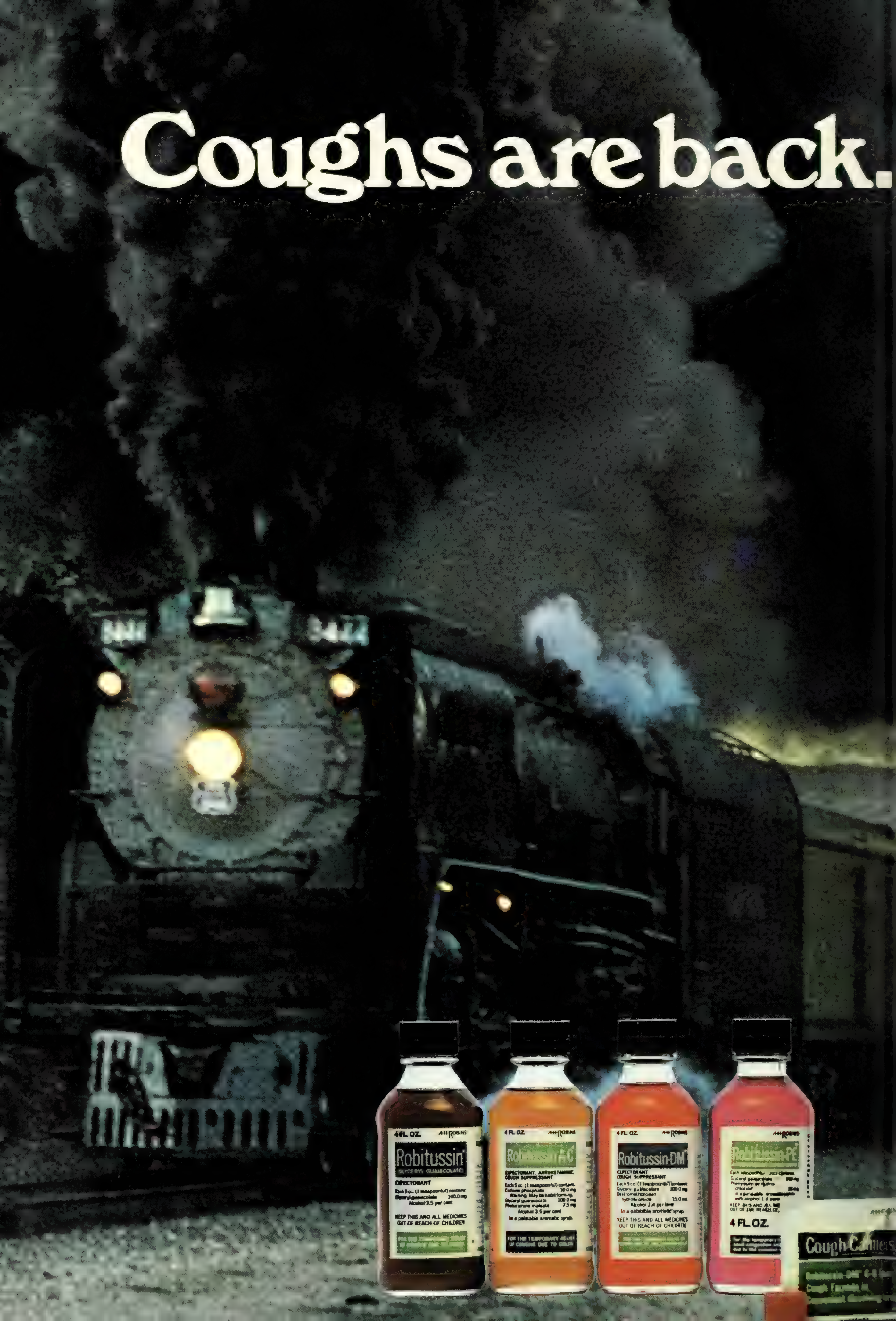
When diarrhea and its discomforts separate a man from his job . . .

Donnagel®

Each fluid ounce contains: Kaolin, 6 g.; Pectin, 142.8 mg.; Hyoscyamine sulfate, 0.1037 mg.; Atropine sulfate, 0.0194 mg.; Hyoscine hydrobromide, 0.0065 mg.; Sodium benzoate (preservative), 60 mg.; Alcohol, 3.8%.

A-H-ROBINS

A. H. Robins Company,
1407 Cummings Drive,
Richmond, Va. 23220


Coughs are back.
4 FL. OZ.
A-H ROBINS
Robitussin
GLYCERYL GUAIACOLATE
EXPECTORANT
KEEP THIS AND ALL MEDICINES OUT OF REACH OF CHILDREN
Robitussin-AC
Robitussin-DM
Robitussin-PE
Cough Calmers

clear the tract with the

Robitussin® Line

The coughing season is here again. Time to rely on the four Robitussins and Cough Calmers to help clear the lower respiratory tract. All contain glyceryl guaiacolate, the efficient expectorant that works systemically to help increase the output of lower respiratory tract fluid. The enhanced flow of less viscid secretions soothes the tracheobronchial mucosa, promotes ciliary action, and makes thick, inspissated mucus less viscid and easier to raise. Available on your prescription or recommendation.

For coughs of colds and "flu"

Robitussin®

Each 5 cc. contains:

Glyceryl guaiacolate .... 100.0 mg.
Alcohol, 3.5%

For unproductive allergic coughs

Robitussin A-C®

Each 5 cc. contains:

Glyceryl guaiacolate .... 100.0 mg.
Pheniramine maleate .... 7.5 mg.
Codeine phosphate .... 10.0 mg.
(warning: may be habit forming)
Alcohol, 3.5%

Non-narcotic for 6-8 hr. cough control

Robitussin-DM®

Each 5 cc. contains:

Glyceryl guaiacolate .... 100.0 mg.
Dextromethorphan hydrobromide .... 15.0 mg.
Alcohol, 1.4%

Clears sinuses and nasal stuffiness as it relieves cough

Robitussin-PE®

Each 5 cc. contains:

Glyceryl guaiacolate .... 100.0 mg.
Phenylephrine hydrochloride .... 10.0 mg.
Alcohol, 1.4%

Robitussin-DM in solid form for "coughs on the go"

Cough Calmers™

Each Cough Calmer contains:

Glyceryl guaiacolate .... 50.0 mg.
Dextromethorphan hydrobromide .... 7.5 mg.

Select the Robitussin® "Clear-Tract" Formulation That Treats Your Patient's Individual Coughing Needs:

Robitussin® extra benefit chart

All 5 Robitussins have an EXPECTORANT-DEMULCENT action. Keep this handy chart as a guide in selecting the formula that provides the *extra* benefits you want for your patient.

	Cough Suppressant	Antihistamine	Long-Acting (6-8 hours)	Nasal, Sinus Decongestant	Non-Narcotic
ROBITUSSIN®					●
ROBITUSSIN A-C®	●	●			
ROBITUSSIN-DM®	●		●		●
ROBITUSSIN-PE®				●	●
COUGH CALMERS™	AHR		AHR		AHR

A. H. Robins Company, Richmond, Va. 23220 A-H-ROBINS

Medical care programs

Governor Milliken learns MSMS views of MACRO Study

By Herbert Mehler, Staff Assistant
MSMS Committee on
Government-Medical Care Programs

This $100,000 study of Michigan health care costs was made by MACRO Systems, Inc., a New York management consulting firm, for the State Legislature and the State Insurance Bureau. After initially intending to study "specific problems facing the Insurance Bureau to determine the roles of the primary organizations involved in health care delivery and health insurance," the "scope of the Study was redirected to define and evaluate the major components of the voluntary health care system in Michigan, including the roles of the State, Blue Cross, Blue Shield, physicians, and hospitals and their effect on the cost and use of health services."

MSMS recognized the possible impact of such a study on patient care and directed staff to thoroughly study and analyze the 138-page report for a response requested by the Governor.

It is anticipated that there may be attempts to implement some of the recommendations either by Legislative action or Executive Order. MSMS will exercise constant surveillance of any actions which may result from the study.

After reviewing the document, The Council authorized Council Chairman Ross V. Taylor, MD, to submit the following letter to the Governor's Office. The letter notes widespread deficiencies in the study because the study did not give proper attention and concern to other important aspects in the health care delivery systems.

December 17, 1970
Honorable William G. Milliken
Governor of Michigan
State Capitol Building
Lansing, Michigan

Dear Governor Milliken:

The Michigan State Medical Society appreciates this opportunity to respond, as requested by Doctor John T. Dempsey, to the MACRO Systems, Inc. Study: "Medical and Health Care in Michigan: A Study of the Voluntary Payments and Delivery Systems and the Structure of Regulations."

It was unfortunate that Michigan State Medical Society was not consulted in the preparation of this document, nor given the opportunity to review it prior to its publication. We could have contributed valuable insights, information and data that would have eliminated many inaccurate, unsubstantiated and indefinite statements leading to its recommendations.

The Study failed to devote attention to the problems of nursing homes, extended care facilities, mental health, or outpatient and in-office medical care. MSMS tried to render a serious in-depth analysis of the Study, based on our best professional judgment, but the informational gaps cited above caused the Study to be invalid as a working document.

The approach used in the Study for controlling costs requires particular knowledge and sophistication in the complex nature of medical economics to understand the resultant cost to the patient. Technical advances in patient care have almost always increased costs and will certainly continue to do so. The rapid development of intensive, coronary, and psychiatric units; cardiac reconstructive surgery; organ transplants and other recent medical advances are expensive, but these advances may cease if monetary cost factors become the chief criteria for patient care. The sophisticated medical care which the public has come to expect relates directly to the cost necessary to provide that high quality medical care.

Michigan State Medical Society is prepared to share its expertise with other interested and concerned people who seek solutions to Michigan's health services delivery.

Very respectfully yours,

Ross V. Taylor, MD
Chairman of The Council

Fast...long-lasting relief of aches and pains of colds and flu

with the unique timed-release aspirin

Double strength Measurin timed-release aspirin offers a new kind of control for your patients with cold and flu discomforts. In each 10-grain tablet are over 6,000 microscopic reservoirs that release aspirin at a controlled rate—some right away and some later on. This means fast relief of symptoms, followed by hours of comfort. Throughout the day, Measurin gives your patients freedom from a 4-hour aspirin schedule. During the night, its 8-hour dosage schedule holds the promise of sound sleep without awakening to take extra tablets.

For Professional Samples write:
Breon Laboratories Inc.
Sample Fulfillment Division
P.O. Box 141
Fairview, N.J. 07022

BREON
BREON LABORATORIES INC.
90 Park Avenue, New York, N.Y. 10016
Subsidiary of Sterling Drug Inc.

MEASURIN®
TIMED-RELEASE ASPIRIN
ECONOMICAL • EFFECTIVE • LONG LASTING PAIN RELIEF
Dosage: 2 tablets followed by 1 or 2 tablets every 8 hours as required, not to exceed 6 tablets in 24 hours. For maximum nighttime pain relief, 2 tablets at bedtime.
Available: Bottles of 12, 36 and 60 tablets.

2
3
4
5
6

the night shift of depression... insomnia

epression is a 24-hour-a-day problem. And insomnia is ften its nocturnal expression. In fact, insomnia may be a ey symptom in establishing the diagnosis of depression.

LAVIL HCl (Amitriptyline HCl, MSD) may prove quite elpful when you have arrived at such a diagnosis. Unlike sychic energizers or agents that merely elevate mood, LAVIL HCl embodies a mild antianxiety action which anifests itself even before the fundamental antidepressant ctivity of the drug becomes evident. Daytime drowsiness ccurs in some patients, usually within the first few ays of therapy.

OTE: Not recommended during the acute recovery phase ollowing myocardial infarction. Patients with cardiovascular isorders should be watched closely; arrhythmias, sinus achycardia, and prolongation of the conduction time have een reported, particularly with high doses; myocardial nfarction and stroke have been reported with drugs of this lass. Close supervision is required for hyperthyroid atients or those receiving thyroid medication. Concurrent lectroshock therapy may increase the hazards of therapy; uch treatment should be limited to patients for whom it is ssential. Discontinue the drug several days before elective urgery if possible.

---

ontraindications: Known hypersensitivity. Should not be given oncomitantly with or within at least 14 days following the discontinuance f a monoamine oxidase inhibitor. Then initiate dosage of amitriptyline HCl autiously with gradual increase in dosage until optimum response is chieved. Not recommended during the acute recovery phase following yocardial infarction or for patients under 12 years of age.
arnings: May block the antihypertensive action of guanethidine or similarly cting compounds. Should be used with caution in patients with a history of eizures or urinary retention, or with narrow-angle glaucoma or increased ntraocular pressure. Patients with cardiovascular disorders should be atched closely; arrhythmias, sinus tachycardia, and prolongation of the onduction time have been reported, particularly with high doses; yocardial infarction and stroke have been reported with drugs of this lass. Close supervision is required for hyperthyroid patients or those eceiving thyroid medication. May impair mental and/or physical abilities equired for performance of hazardous tasks, such as operating machinery r driving a motor vehicle. Safe use during pregnancy and lactation has not een established; in pregnant patients, nursing mothers, or women who may ecome pregnant, weigh possible benefits against possible hazards to other and child.
recautions: When used to treat the depressive component of schizophrenia, sychotic symptoms may be aggravated; in manic-depressive psychosis, epressed patients may experience a shift toward the manic phase, and aranoid delusions, with or without associated hostility, may be xaggerated; in any of these circumstances, it may be advisable to reduce he dose of amitriptyline HCl, or to use a major tranquilizing drug, such as erphenazine, concurrently. When given with anticholinergic agents or sympathomimetic drugs, close supervision and careful adjustment of dosages are required. May enhance the response to alcohol and the effects of barbiturates and other CNS depressants. The possibility of suicide in depressed patients remains during treatment and until significant remission occurs; this type of patient should not have easy access to large quantities of the drug. Concurrent electroshock therapy may increase the hazards of therapy; such treatment should be limited to patients for whom it is essential. Discontinue the drug several days before elective surgery if possible.
Adverse Reactions: *Note:* Included in this listing are a few adverse reactions not reported with this specific drug. However, pharmacological similarities among the tricyclic antidepressant drugs require that each reaction be considered when amitriptyline is administered.
Cardiovascular: Hypotension, hypertension, tachycardia, palpitation, myocardial infarction, arrhythmias, heart block, stroke. *CNS and Neuromuscular:* Confusional states; disturbed concentration; disorientation; delusions; hallucinations; excitement; anxiety; restlessness; insomnia; nightmares; numbness, tingling, and paresthesias of the extremities; peripheral neuropathy; incoordination; ataxia; tremors; seizures; alteration in EEG patterns; extrapyramidal symptoms. *Anticholinergic:* Dry mouth, blurred vision, disturbance of accommodation, constipation, paralytic ileus, urinary retention, dilatation of urinary tract. *Allergic:* Skin rash, urticaria, photosensitization, edema of face and tongue. *Hematologic:* Bone marrow depression including agranulocytosis, eosinophilia, purpura, thrombocytopenia. *Gastrointestinal:* Nausea, epigastric distress, vomiting, anorexia, stomatitis, peculiar taste, diarrhea, parotid swelling. *Endocrine:* Testicular swelling and gynecomastia in the male, breast enlargement and galactorrhea in the female, increased or decreased libido. *Other:* Dizziness, weakness, fatigue, headache, weight gain or loss, increased perspiration, urinary frequency, mydriasis, drowsiness, jaundice. *Withdrawal Symptoms:* Abrupt cessation of treatment after prolonged administration may produce nausea, headache, and malaise; these are not indicative of addiction.
How Supplied: Tablets containing 10 mg and 25 mg amitriptyline HCl, in single-unit packages of 100 and bottles of 100, 1000, and 5000; tablets containing 50 mg amitriptyline HCl, in single-unit packages of 100 and bottles of 100 and 1000; for intramuscular use, in 10-cc vials containing per cc: 10 mg amitriptyline HCl, 44 mg dextrose, and 1.5 mg methylparaben and 0.2 mg propylparaben as preservatives.
For more detailed information, consult your MSD representative or see the Direction Circular. Merck Sharp & Dohme, Division of Merck & Co., Inc., West Point, Pa. 19486

when the diagnosis is depression

ELAVIL® HCl

(AMITRIPTYLINE HCl | MSD)

MSD MERCK SHARP & DOHME

Doctor Schooten

Dr. Schooten adds new chapter to story book life

The fairy-tale life story of Detroit's Sarah Schooten, MD, continues to grow.

On Jan. 14 the pediatrician, who received one of six MSMS Certificates of Commendation at the 1970 Annual Session, flew from Detroit to spend three weeks in Kenya. There she was to immunize Masai children against rubeola measles.

Doctor Schooten, 76, accompanied Edith Davis, MD, Tucson, Ariz., immediate past president of the American Medical Women's Association, who organized the project and is to remain in Kenya until all 14,000 doses of vaccine promised by American drug companies are given.

Doctor Davis is on sabbatical leave to assist her friend, J. Lowrie Anderson, MD, a medical missionary in Keren, Kenya. Doctor Davis and Doctor Schooten were to administer the vaccinations at Doctor Anderson's mission.

The two women met while attending the International Medical Women's Association meeting last February in Australia. They were housed in the same hotel there.

In addition to the 14,000 doses of vaccine they will give to the Masai children, the two doctors were to dispense hard candies donated by the Sanders Candy Co., wear gowns donated by Providence Hospital in Southfield and carry emergency medical kits given them by Medical Arts.

Doctor Schooten's fascinating life has included long and devoted service to the St. Vincent's Sarah Fisher Home, the Salvation Army Children's Home, the St. Francis Cabrini Clinic and many other youth-serving organizations in Detroit.

She was born in Burma of missionary parents, married a Dutch sea captain who was lost at sea soon after, and speaks five languages. She has adopted four Korean children; has sent seed, buffalo, fertilizer, chickens and pigs to the poor people on the Korean island of Cheju Do. She was elected by the Greater Detroit Chamber of Commerce as one of the Ten Top Working Women of 1970.

Michigan physicians' services to JAMA acknowledged

Twenty-five Michigan physicians and three other Michigan residents are acknowledged with appreciation for their valued services as consultants to *The Journal of the American Medical Association* during the past year.

The physicians, from Ann Arbor, are Richard J. Allen, MD; William H. Beierwaltes, MD; Jerome W. Conn, MD; the late Arthur C. Curtis, MD; Fred M. Davenport, MD; F. Robert Fekety, Jr., MD; the late Thomas Francis, Jr., MD; Arthur B. French, MD; Sibley W. Hoobler, MD; Robert S. Krooth, MD; Kenneth R. Magee, MD; William M. Mikkelsen, MD; James V. Neel, MD; H. Marvin Pollard, MD; William D. Robinson, MD; Vergil N. Slee, MD; Herbert E. Sloan, Jr., MD; and Robert B. Sweet, MD.

Consultants from Detroit are Elisha S. Gurdjian, MD; William S. Harbrich, MD; Clarence S. Livingood, MD; Irwin J. Schatz, MD; Joseph H. Shaffer, MD; Vainutis K. Vaitkevicius, MD, and Wolfgang Zuelzer, MD.

Non-physician consultants were Ross Benham, PhD, Pontiac; Warren C. Eveland, PhD, Ann Arbor, and Donald A. Kerr, DDS, Ann Arbor.

Eli M. Brown, MD, Huntington Woods, is new chairman of the board of governors of the American Society of Anesthesiologists, the certifying body of the American College of Anesthesiologists. Doctor Brown is chairman of anesthesiology at Sinai Hospital, Detroit, and is adjunct associate professor of anesthesiology at WSU School of Medicine.

Alexander P. Dukay, MD, Ypsilanti, will step down this month as medical superintendent of Ypsilanti State Hospital. Doctor Dukay will practice psychiatry at Mercywood and St. Joseph Mercy Hospitals in Ann Arbor and will serve as consultant to the Monroe County Community Mental Health Center.

Vlado A. Getting, MD, Ann Arbor,
is vice president of public health for the American College of Preventive Medicine. Elected recently to the ACPM position, Doctor Getting is chairman of the department of Community Health Services, School of Public Health, University of Michigan.

Karl S. Klicka, MD, Wayne,
is the recipient of a resolution passed by the Michigan legislature honoring him for his "outstanding contributions" to the health care field in Michigan. Doctor Klicka is executive director of the Peoples Community Hospital Authority.

George R. Mikhail, MD, Detroit,
received a silver award at the recent annual meeting in Chicago of the American Academy of Dermatology. He won the award with his exhibit of the study of a skin disease. Another Michigan physician, Amir H. Mehregan, MD, Montor, received a special award of artistic merit for his exhibit on photographs of skin diseases.

John C. Peirce, MD, Grand Rapids,
is chairman-elect of the Michigan Kidney Foundation's Scientific Advisory Board.

Thomas A. Petty, MD, Grosse Pointe, and
Viggo W. Jensen, MD, Detroit,
were presented with plaques recently by Bruce L. Danto, MD, Detroit, director of the Suicide Prevention Center, Detroit. Doctor Petty and Doctor Jensen were honored for their pioneer efforts in behalf of suicide research.

Herbert A. Raskin, MD, Detroit,
was quoted extensively in a *Chicago Sun Times* article reporting the talks at a recent drug abuse symposium in Chicago. Sponsors of the symposium were the AMA, Illinois State Medical Society and the Pfizer Laboratories. Doctor Raskin, speaking at the symposium, asked that doctors be more compassionate in their treatment of drug addicts.

Ernest Rodin, MD, Detroit,
is new president of the Michigan Neurological Association, succeeding Russel DeJong, Ann Arbor. Dave B. Ruskin, MD, Saginaw, is new vice president. Doctor Rodin is with the Lafayette Clinic in Detroit.

Raymond W. Waggoner, MD, Ann Arbor,
U-M professor of psychiatry, has been named director of continuing education for the Reproductive Biology Research Foundation at St. Louis. The foundation is run by William H. Masters, MD, and Mrs. Virginia E. Johnson, who have pioneered treatment of couples with sexual dysfunction.

BURDICK'S
NEW MW/225
MICROWAVE
DIATHERMY

INSTANT WARM-UP
MORE POWER
NEW VERSATILITY

The new MW/225 is an efficient, reliable source of therapeutic heat that is deeply penetrating, simple to control, and easily confined to specific treatment areas.

- **Instant warm-up/no waiting period**
- **125 watts of power output**
- **New directors offer effective wide-zone heating patterns at greater distances**
- **Flexible director cable; reliable 0/30-minute timer; solid state power supply designed and engineered for service-free operation; FCC Type Approval D-598**

The MW/225 is easy to operate, saves time and offers a wider range of applications. Fully-adjustable arm for easy positioning; modern styling, large casters for safe mobility, large storage space.

See your Burdick dealer for a demonstration, or write **The Burdick Corporation, Milton, Wisconsin 53563.**

BURDICK®

THE G. A. INGRAM COMPANY
4444 Woodward Avenue, Detroit, Michigan 48201
Telephone: TEmple 2-4444

Extract of MSMS Council minutes; meeting of Dec. 9, 1970

ECONOMIC INFORMATION—The Council approved establishment of the new MSMS Bureau of Economic Information, to provide counseling and negotiating service including a research librarian, computer programmer, economist, attorney (negotiator), one or two secretaries and adequate office space and equipment, to be funded by a dues increase adequate to cover the estimated costs of $150,000 annually.

PEER REVIEW—The Council approved the recommendations of the County Societies Committee that (1) in those cases where county medical societies act as their own Regional Medical Advisory Committees and appeals become necessary, they should be made directly to the MSMS Committee on Utilization and Health Insurance Problems; (2) in the event a county society does not have an ongoing committee to handle peer review, insurance carriers should refer all cases to the president of the county medical society, and (3) matters including charge patterns or utilization problems involving an area rather than an individual physician should be brought directly to the MSMS Committee on Utilization and Health Insurance Problems.

MALPRACTICE CASE—The Council authorized the MSMS legal counsel to intervene in the rehearing of a Michigan malpractice case in which the Michigan Supreme Court abandoned the long-standing test of the standard of care of the defendant's community or comparable communities and in effect now holds the doctor to the highest standard of information available anywhere. The legal counsel was directed by The Council to file a brief for MSMS, *amicus curiae,* if appropriate in his opinion, and also to contact other organizations for possible cooperation in this matter if he feels it advisable.

MACRO STUDY—The Council approved the Legislative Policy Committee's recommendation to inform the Governor's Office that the Macro Systems study of Michigan health care delivery is incomplete, lacks validity, contains unsubstantiated and erroneous data. The good offices of MSMS were to be offered to cooperate with other parties in discussing health care delivery in Michigan.

NEW MEDIGRAM—The Council was informed of MSMS staff plans to publish a new Medigram to be mailed twice-monthly on a semi-confidential basis to selected medical leaders, to contain more than just legislative information, to be written and produced at MSMS headquarters and to be considered an adjunct to *Michigan Medicine* and the *News Extra.*

MEDICAL MEETINGS—The Council authorized A. Stewart Kerr, MSMS legal counsel, to attend the National Medico-Legal Symposium in New York City March 18-20, and authorized Donald McCorvie, MD, Williamston, chairman of the MSMS Committee on Rural Medical Service, to attend the 24th National Conference on Rural Health in Atlanta March 25-26.

ANNUAL SESSION—The Council approved appointment of a program director of the annual scientific session to a one-year trial basis, to serve as an adjunct to the staff for a stipend of $750, to coordinate program suggestions and recommendations of all MSMS sections and specialty societies and to be responsible for the scientific activities during the two-day annual meeting in Grand Rapids.

MICHIGAN FOUNDATION—The Council approved appointing an ad hoc committee to provide guidance on the purposes and functions of a proposed Michigan foundation-type corporation, with papers to be drawn ready to be filed, in case the PRSO provision in the Bennett amendments to the Social Security amendments be enacted into law, and for other possible uses in negotiating on behalf of Michigan doctors.

MIDSUMMER MEETING—The Council selected Boyne Highlands as the site for its 1971 Midsummer Meeting; the dates of July 30-Aug. 1 were later confirmed.

1971 BUDGET—The Council approved the 1971 budget incorporating the previous directives of the Finance Committee in the area of employee benefits, including group term life insurance for all employees and disability benefits for the managers and director.

CHILD WELFARE—The Council suggested to the Child Welfare Committee that it begin exploratory discussion with medical advisors of pharmaceutical manufacturers to seek a possible policy statement regarding production of drugs in Michigan.

When Preventing Constipation is a Concern . . .

Consider

SURFAK®

dioctyl calcium sulfosuccinate

(stool softener)

Surfak prevents constipation:

- **naturally**
  - . . . without bowel distention
  - . . . without adding sodium to the system
  - . . . without requiring unusual intake of water
- **conveniently**—one 240 mg. capsule per day
- **economically**—costs less per effective daily dose*

Supplied: Bottles of 15, 100 (FSN 6505-926-8844) and 1000 (FSN 6505-890-1627) and Unit Dose 100's (10 x 10 strips).

HOECHST
PHARMACEUTICAL CO.
Somerville, N.J. 08876 U.S.A.

---

*based on actual drug store survey of prescribed dosages

in cardiac edema

Trademark

Dyazide®

Each capsule contains 50 mg. of Dyrenium® (brand of triamterene) and 25 mg. of hydrochlorothiazide.

gets the water out

spares the potassium

Before prescribing, see complete prescribing information in SK&F literature or *PDR.*

Indications: Edema associated with congestive heart failure, cirrhosis of the liver, the nephrotic syndrome, late pregnancy; also steroid-induced and idiopathic edema, and edema resistant to other diuretic therapy. 'Dyazide' is also indicated in the treatment of mild to moderate hypertension.

Contraindications: Pre-existing elevated serum potassium. Hypersensitivity to either component. Continued use in progressive renal or hepatic dysfunction or developing hyperkalemia.

Warnings: **Do not use dietary potassium supplements or potassium salts unless hypokalemia develops or dietary potassium intake is markedly impaired.** Enteric-coated potassium salts may cause small bowel stenosis with or without ulceration. Hyperkalemia ($>$5.4 mEq/L) has been reported in 4% of patients under 60 years, in 12% of patients over 60 years, and in less than 8% of patients overall. Rarely, cases have been associated with cardiac irregularities. Accordingly, **check serum potassium during therapy, particularly in patients with suspected or confirmed renal insufficiency (e.g., certain elderly or diabetics). If hyperkalemia develops, substitute a thiazide alone. If spironolactone is used concomitantly with 'Dyazide', check serum potassium frequently**—they can both cause potassium retention and sometimes hyperkalemia. Two deaths have been reported in patients on such combined therapy (in one, recommended dosage was exceeded; in the other, serum electrolytes were not properly monitored). Observe regularly for possible blood dyscrasias, liver damage or other idiosyncratic reactions. Blood dyscrasias have been reported in patients receiving Dyrenium (triamterene, SK&F). Rarely, leukopenia, thrombocytopenia, agranulocytosis, and aplastic anemia have been reported with the thiazides. Watch for signs of impending coma in acutely ill cirrhotics. Thiazides are reported to cross the placental barrier and appear in breast milk. This may result in fetal or neonatal hyperbilirubinemia, thrombocytopenia, altered carbohydrate metabolism and possibly other adverse reactions that have occurred in the adult. When used during pregnancy or in women who might bear children, weigh potential benefits against possible hazards to fetus.

Precautions: Do periodic serum electrolyte and BUN determinations. Do periodic hematologic studies in cirrhotics with splenomegaly. Antihypertensive effects may be enhanced in post-sympathectomy patients. The following may occur: hyperuricemia and gout, reversible nitrogen retention, decreasing alkali reserve with possible metabolic acidosis, hyperglycemia and glycosuria (diabetic insulin requirements may be altered), digitalis intoxication (in hypokalemia). Use cautiously in surgical patients. Concomitant use with antihypertensive agents may result in an additive hypotensive effect.

Adverse Reactions: Muscle cramps, weakness, dizziness, headache, dry mouth; anaphylaxis; rash, urticaria, photosensitivity, purpura, other dermatological conditions; nausea and vomiting (may indicate electrolyte imbalance), diarrhea, constipation, other gastrointestinal disturbances. Rarely, necrotizing vasculitis, paresthesias, icterus, pancreatitis, and xanthopsia have occurred with thiazides alone.

Supplied: Bottles of 100 capsules.

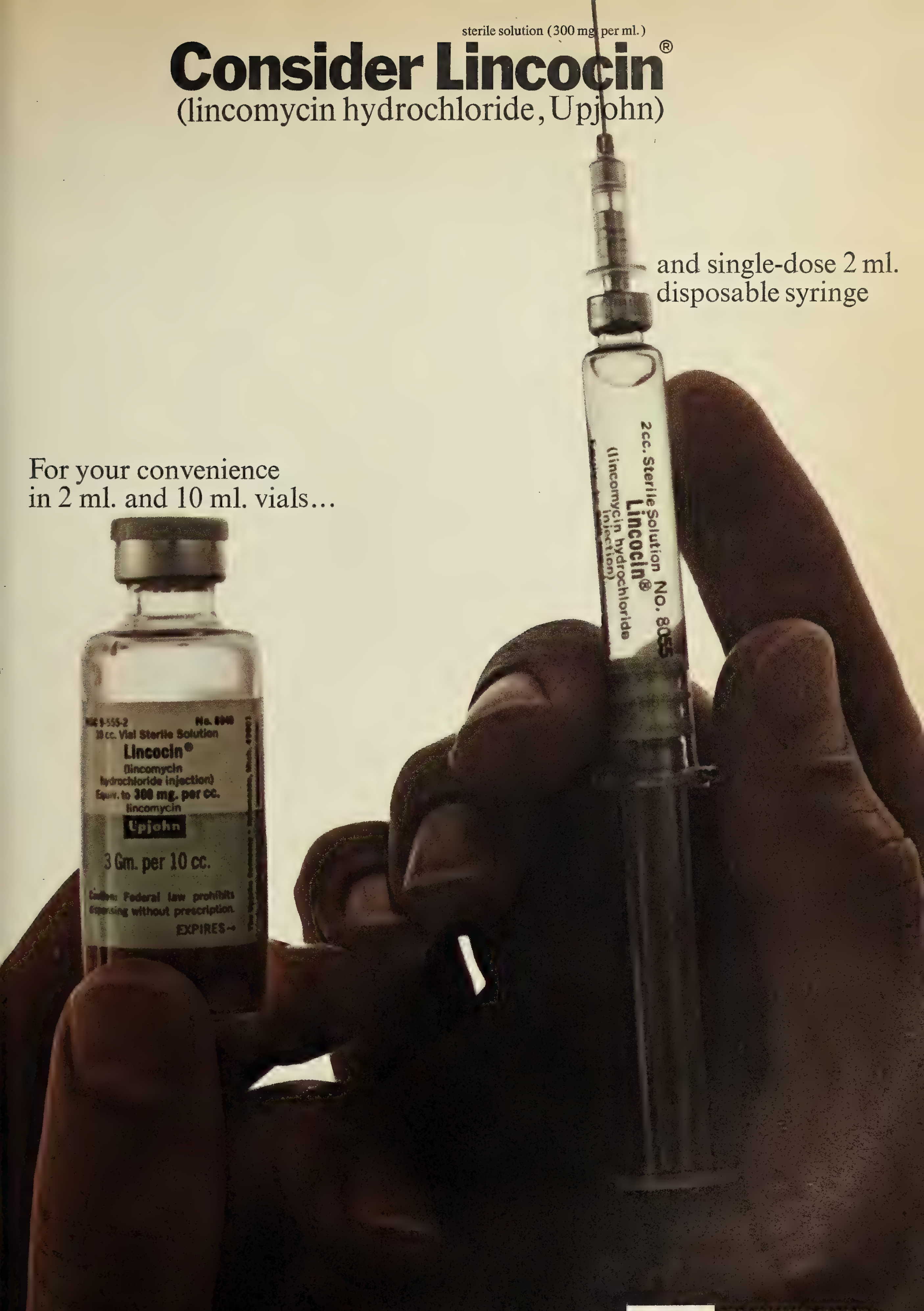
SK&F

SK&F Co., Carolina, P.R. 00630
a subsidiary of Smith Kline & French Laboratories

sterile solution (300 mg. per ml.)

Consider Lincocin®

(lincomycin hydrochloride, Upjohn)


10 cc. Vial Sterile Solution
Lincocin®
(lincomycin
hydrochloride injection)
Equiv. to 300 mg. per cc.
lincomycin
Upjohn
3 Gm. per 10 cc.
Caution: Federal law prohibits
dispensing without prescription.
EXPIRES→
2cc. Sterile Solution No. 8055
Lincocin®
(lincomycin hydrochloride
injection)

and single-dose 2 ml.
disposable syringe

For your convenience
in 2 ml. and 10 ml. vials...

y The Upjohn Company JA70-9835 MED B-4-S (KZL-5)

Upjohn THE UPJOHN COMPANY
KALAMAZOO, MICHIGAN 49001

You can't fell a redwood with a hatchet

With vitamins, too, relative needs determine the choice.

A low potency vitamin formula may be "a good thing." But when the need for vitamins is great, only a *high potency formula* will do.

THERAGRAN is often indicated as a high potency vitamin formula pre- and postoperatively, and in many patients with: arthritis, diabetes, pancreatitis, infectious disease, hepatic disease, cardiac disease, degenerative disease, osteoporosis, alcoholism, dermatologic conditions, psychiatric disorders, malabsorption syndrome, peptic ulcer, ulcerative colitis, other gastrointestinal disease, and during the menopause. Also available with minerals as THERAGRAN-M.

Theragran®

High Potency Vitamin Formula

Theragran®-M

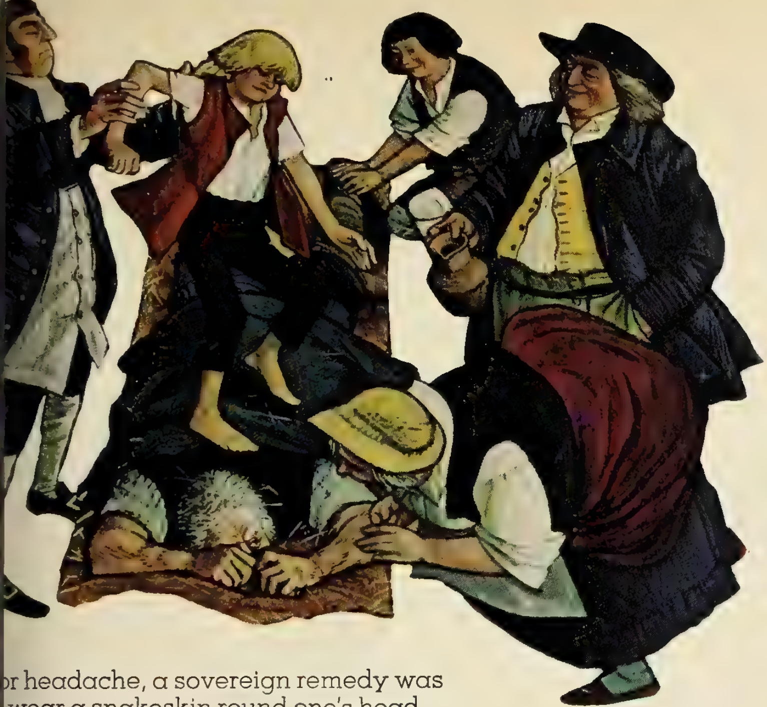
High Potency Vitamin Formula with Minerals

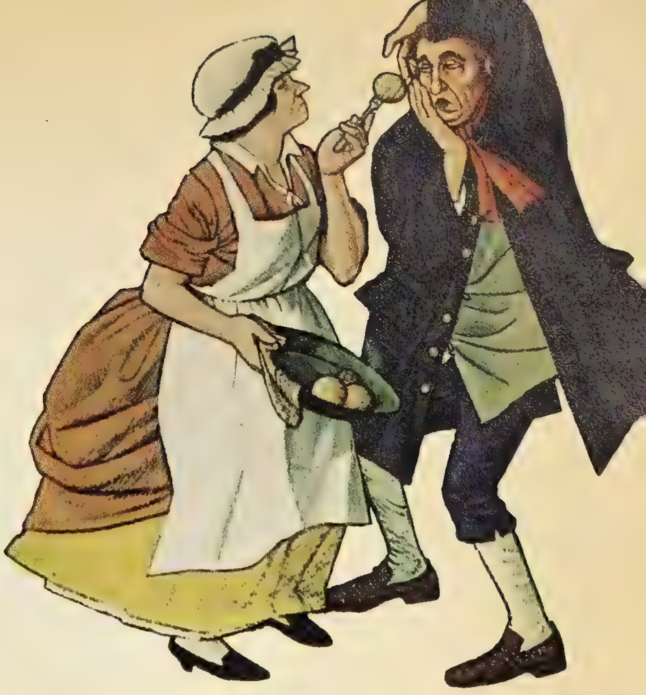
SQUIBB

'The Priceless Ingredient of every product is the honor and integrity of its maker.'™

© E.R. Squibb & Sons, Inc. 1970

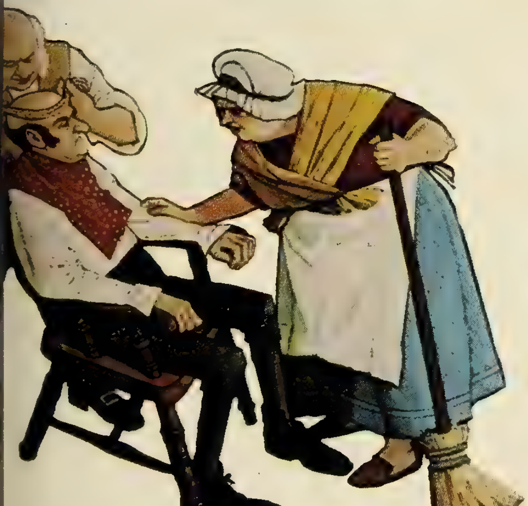
once-popular treatment for back pains
as to have the seventh son of a seventh son
nd or walk on the patient's back.





The pain of earache was allegedly relieved by holding a hot roasted onion to the ear.

r headache, a sovereign remedy was
wear a snakeskin round one's head.



A realistic approach to pain relief

Empirin®

ompound with Codeine
hosphate gr. 1/2 No. 3

ach tablet contains:
odeine Phosphate gr. 1/2 (Warning—
ay be habit forming), Phenacetin gr. 2 1/2,
spirin gr. 3 1/2, Caffeine gr. 1/2.

eeps the promise
f pain relief

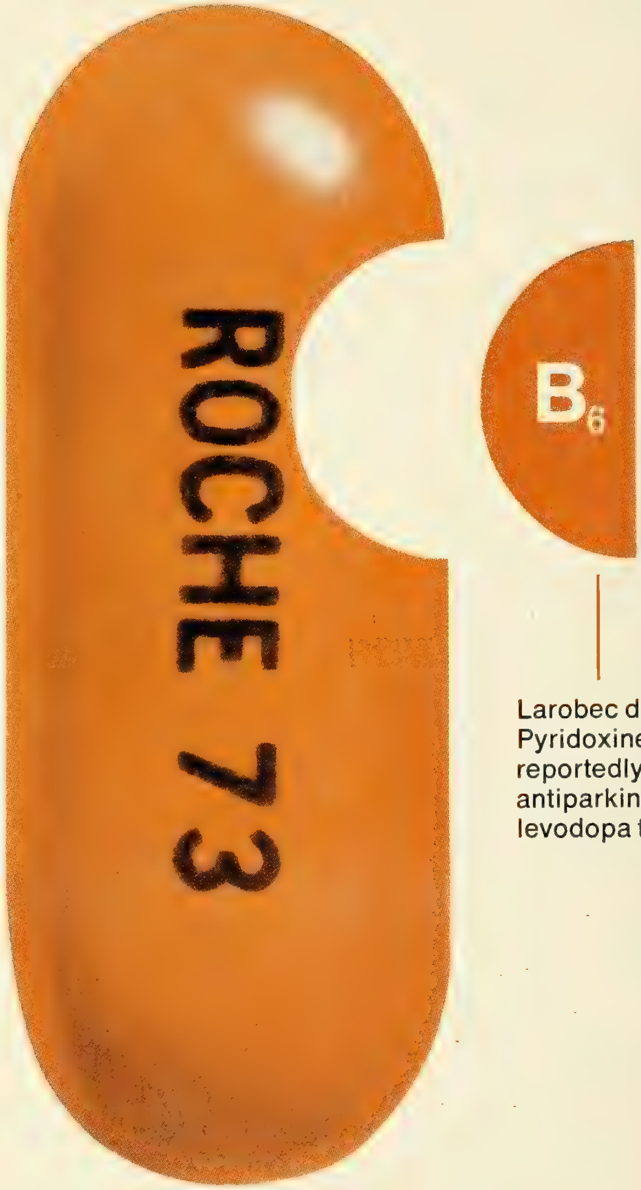
.W. & Co.' narcotic products are
ass "B", and as such are available on oral
escription, where State law permits.

BURROUGHS WELLCOME & CO. (U.S.A.) INC.
Tuckahoe, N.Y.

the incomplete B-complex

SPECIFICALLY FOR LEVODOPA PATIENTS—NUTRITIONAL SUPPORT WITHOUT PYRIDOXIN

Larobec provides: B-complex vitamins, of particular importance to the patient who is on levodopa therapy and is deficient in water-soluble vitamins.



Larobec does *not* provide: Pyridoxine (vitamin B_6)—whic reportedly reverses the antiparkinson effects of levodopa therapy.[1,2]

Larobec provides: Ascorbic acid, useful in assisting tissue repair in the debilitated patient.

Larobec^T.M. Tablets

A high-potency nutritional supplement specific to the needs of patients with Parkinson's disease and syndrome on levodopa therapy—that describes new Larobec^T.M. from Roche. Larobec provides the major B vitamins plus vitamin C—*but does not provide pyridoxine.* Thus, with its specially tailored formula, Larobec assures the patient important nutritional support without minimizing any of the benefits of levodopa therapy.

1. Duvoisin, R. C.; Yahr, M.D., and Coté, L. D.: *Trans. Amer. Neurol. Assoc., 94*:81, 1969.
2. Cotzias, G. C.: *J.A.M.A., 210*:1255, 1969.

Complete Prescribing Information:
Each Larobec tablet contains:

Thiamine mononitrate (vitamin B_1)	15 mg
Riboflavin (vitamin B_2)	15 mg
Niacinamide	100 mg
Calcium pantothenate	20 mg
Cyanocobalamin (vitamin B_{12})	5 mcg
Folic acid	0.5 mg
Ascorbic acid (vitamin C)	500 mg

Description: For prophylactic or therapeutic nutritional supplementation concomitant with levodopa therapy in patients with Parkinson's disease and syndrome, Larobec provides high potency dosages of the major B-complex vitamins, without pyridoxine (vitamin B_6) which has been reported[1,2] to reduce the clinical benefits of levodopa therapy. B-complex vitamins are essential in the anabolism of carbohydrate and protein and in hematopoiesis. Larobec also contains therapeutic quantities of ascorbic acid, a substance involved in intracellular reactions such as tissue repair and collagen formation.

Indications: Larobec is indicated for supportive nutritional supplementation when a water-soluble vitamin formula (without pyridoxine) is required prophylactically or therapeutically in patients under treatment with levodopa.

Warning: Administration of vitamin B_6 may be required if signs of pyridoxine deficiency develop. Larobec is not intended for treatment of pernicious anemia or other primary or secondary anemias. Neurologic involvement may develop or progress, despite temporary remission of anemia, in patients with pernicious anemia who receive more than 0.1 mg of folic acid per day and who are inadequately treated with vitamin B_{12}.

Dosage and Administration: One or two tablets daily, as indicated by clinical need.

How Supplied: Orange-colored, capsule-shaped tablets, imprinted Roche 73; bottles of 100.

References:
1. Duvoisin, R. C., *et al.*: *Trans. Amer. Neurol. Assoc.*, *94*: 81, 1969.
2. Cotzias, G. C.: *J.A.M.A.*, *210*:1255, 1969.

high-potency nutritional support for the levodopa patient

Larobec T.M.

ROCHE
Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, N.J. 07110

Medical Assistance in Michigan explained

The following article is the third in a new series begun in the January issue of MICHIGAN MEDICINE. The articles are designed to explain the many health care assistance programs to the physician, enabling him to provide accurate information if his patient requests assistance. The articles, which may be retained for reference by the physician and his assistant, will continue in future issues of the journal.

Medical Assistance in Michigan

What is medical assistance?

The medical assistance program is a plan to help needy persons pay for a variety of medical services necessary to protect health which are authorized under state law and furnished by approved providers. (This program is sometimes referred to as *Medicaid* to distinguish it from the federal health insurance plan, Medicare.)

Who may receive medical assistance?

Medical assistance (MA) is available to persons who:

a. are residents of Michigan; *and*

b. qualify under Group 1 or Group 2 below.

Group 1—Categorically needy persons

a. *ALL* persons who are receiving public assistance money grants (old age assistance—OAA, aid to dependent children—ADC, aid to the blind—AB, aid to the disabled—AD) from the state of Michigan.

b. Persons who meet all the requirements for one of these programs, but who choose not to apply for a money grant.

c. Persons who would meet the conditions of eligibility for ADC if the children were attending school.

d. Persons *under 21 years of age* whose families are in financial need according to the standards of the ADC program.

Group 2—Medically needy persons

a. Persons whose income or property is above the money-grant standard, but who meet the

CONSTIPATION
EVACUATE GENTLY

With EVAC-U-GEN — your patients with functional constipation can evacuate gently. Because EVAC-U-GEN has a mild laxative action and tends to cause the stool to be soft — it is highly desirable for those sensitive to harsh laxatives — particularly children, pregnant women, and geriatric patients. Recommend EVAC-U-GEN for the management of functional constipation. It is highly effective. Non-griping. Chewable. Very palatable. Economical.

EVAC-U-GEN®

A highly-flavored and palatable tablet of yellow phenolphthalein, bismuth subcarbonate, bismuth subgallate in special base. Chewable. Bottles of 35 and 100. Adult Dose: Chew 1 or 2 tablets night or morning. Children (up to age 10): ½ tablet. A citrus drink taken with tablet will stimulate action.
PRECAUTION: Do not use when symptoms of appendicitis are present and discontinue use if skin rash appears. Dependence on laxatives can result from continued use.

W-C
PRECISION PHARMACEUTICALS

SEND FOR SAMPLES.
WALKER, CORP & CO., INC.
Syracuse, New York 13201

nonfinancial conditions of eligibility for one of the money-grant programs (except the ADC school attendance requirement) *and* who meet the conditions of financial eligibility given below.

b. Persons *under 21 years* of age whose families meet the conditions of financial eligibility for MA given below.

Persons in Group 2 are financially eligible for MA if their income *and* property are within the limitations given in the tables below. Individuals and families whose income exceeds the limitation in Table I and who apply their excess income toward the cost of their medical care *may still be eligible for payment of part of the cost.* Individuals and families whose *property* exceeds the limitations in Table II are not eligible for MA.

TABLE I

Income Limitations
Family Living Situations

Number in Family	Annual Income	Monthly Income
1	$1900	$158.33
2	2700	225.00
3	3120	260.00
4 or more	add $420 per additional person	add $35 per additional person

Lower income limitations are established for individuals living in long-term care facilities such as nursing homes.

TABLE II

Property Limitations

Number in Family	Property Value
1	$1500
2	2000
3	2200
4 or more	add $200 per additional person

The following types of property are exempt in determining the value of a family's property:

a. the homestead;

b. clothing and household effects;

c. tangible personal property used in earning income; and

d. $1000 cash value of life insurance.

What services are available under the MA program?

The following services are available when a physician has established medical necessity:

To Group 1:

1. Inpatient hospital services.
2. Outpatient hospital services for emergencies and specified diagnostic screening.
3. Skilled nursing care in certified facilities.
4. Physicians' services wherever needed.
5. Pharmaceutical services.
6. Laboratory and X-ray services.
7. Specified home health services.
8. Family planning services.
9. Ambulance service to and from a hospital for inpatient services, or *to* a hospital for emergency treatment.

To Group 2:

Persons in this group are eligible for the same services as listed above with the following *exceptions*:

1. Family planning services are not included.
2. Outpatient hospital services are limited to specified diagnostic and emergency services.
3. Physicians' services are limited to:
    a. those provided to hospital inpatients;
    b. a portion of services provided in a nursing home or other long term care facility; and
    c. emergency care, wherever provided.
4. Pharmaceutical services are available only when the individual is a hospital inpatient.

How is application made for medical assistance?

Persons receiving a public assistance money grant (i.e., OAA, ADC, AB, or AD) do *not* need to make a separate application for MA. Other individuals may request MA in person, by telephone, or in writing to the *county department of social services in the county where they live.* The county department is expected to process requests within 60 days for AD and the AD-related program, within 30 days for other programs, and, if eligibility is established, to authorize assistance within that time period. Payment for medical services may be made back to the first day of the month in which the request for assistance was made.

An individual or family found eligible will be issued an MA authorization card which shows the names of persons for whom the card may be used

(Continued on Page 164)

INSOMNIA
SEDATE EFFECTIVELY

With QUĪ-A-ZONE — you can sedate effectively. A balanced combination of short, intermediate, and long-acting barbiturates (totaling 100 mg.) in a rapidly disintegrating tablet — sedation is provided within a few minutes . . . followed by sound restful sleep . . . usually without morning hangover. The four barbiturates in QUĪ-A-ZONE have dual channels of elimination (renal and hepatic) to lessen metabolic burden, decrease barbiturate retention, and minimize depression.

QUĪ-A-ZONE™

Each rapidly-disintegrating tablet contains 25 mg. secobarbital, 25 mg. pentobarbital, 25 mg. butabarbital, and 25 mg. phenobarbital. Bottles of 100.
Usual Adult Dose: 1 to 2 tablets before retiring.
PRECAUTION: Should not be administered to patients sensitive to barbiturates, or in cases of known previous addiction. Warning: May be habit forming.

W-C PRECISION PHARMACEUTICALS

SEND FOR SAMPLES.
WALKER, CORP & CO., INC.
Syracuse, New York 13201

When irritable colon feels like this

The blowfish, a small specie of fish, reacts to stress or fright by puffing itself up wi air. After about a dozen noisy gulps the belly is ballo shaped and hard. When replaced in the water the ai quickly expelled, and the fish sinks to the bottom.

...in the presence of spasm or hypermotility, gas distension and discomfort, **KINESED**® provides more complete relief:

☐ belladonna alkaloids—for the hyperactive bowel ☐ simethicone—for accompanying distension and pain due to gas ☐ phenobarbital—for associated anxiety and tension

Composition: Each chewable, fruit-flavored, scored tablet contains: 16 mg. phenobarbital (warning: may be habit-forming); 0.1 mg. hyoscyamine sulfate; 0.02 mg. atropine sulfate; 0.007 mg. scopolamine hydrobromide; 40 mg. simethicone.

Contraindications: Hypersensitivity to barbiturates or belladonna alkaloids, glaucoma, advanced renal or hepatic disease.

Precautions: Administer with caution to patients with incipient glaucoma, bladder neck obstruction or urinary bladder atony. Prolonged use of barbiturates may be habit-forming.

Side effects: Blurred vision, dry mouth, dysuria, and other atropine-like side effects may occur at high doses, but are only rarely noted at recommended dosages.

Dosage: Adults: One or two tablets three or four times daily. Dosage can be adjusted depending on diagnosis and severity of symptoms. Children 2 to 12 years: One half or one tablet three or four times daily. Tablets may be chewed or swallowed with liquids.

STUART PHARMACEUTICALS | Pasadena, California 91109 | Division of ATLAS CHEMICAL INDUSTRIES, INC.

(from the Greek **kinetikos**,
to move,
and the Latin **sedatus**,
to calm)

KINESED®

antispasmodic/sedative/antiflatulent

to obtain medical services. Persons receiving a money grant will be issued such a card monthly as long as they remain eligible for public assistance. Persons eligible for Group 2 services will receive an authorization card covering their period of eligibility for MA.

Redeterminations of eligibility for persons receiving MA are made periodically, but at least every 12 months. The recipient is expected to notify the county department promptly (within 14 days) of any changes in his circumstances which might affect his eligibility, such as changes in income, property, employment, or in the number of persons living in the home. MA will be discontinued if the person is found to be no longer eligible following review of such changes by the county department.

In order to establish and maintain eligibility, MA clients must first use all other available resources (such as medical or hospital insurance benefits or *Medicare, or both*) which may help them to meet their medical expenses.

People over 65 years of age may qualify for both Medicare (the federal program) and Medicaid (MA). In such cases MA may complement Medicare by paying all or part of the deductible and coinsurance costs of Medicare's hospital and medical insurance. Medicare benefits must be utilized before any payments can be made under MA.

Support from Relatives. For purposes of MA, the only responsible relatives are spouse for spouse and parent for child under 21 years of age. Only the amount actually received from such relatives is considered income in determining eligibility. However, legal action may be initiated if voluntary contributions are not adequate.

Persons living in public institutions such as county infirmaries, prisons, etc., are not eligible for MA. However, patients in public *medical* institutions may be eligible. Patients in an approved institution for tuberculosis or mental illness may be eligible for MA only if they are 65 years of age or older.

Moving permanently to another state disqualifies a person for MA from Michigan. However, a Michigan resident who is *temporarily* out of the state may receive MA under certain conditions even though services are being provided in another state. In either case the county department should be advised of the plan to leave Michigan *before* the move is made. Prior approval should be obtained, whenever possible, before seeking medical care or service in another state.

A hearing may be requested by an applicant for or recipient of assistance who is dissatisfied with any action, failure to act, or undue delay in action on his request for assistance. He should first discuss the matter with a worker or supervisor in the county department. If a satisfactory agreement cannot be reached, he has the right to a hearing before a representative of the Director of the State Department of Social Services. If a hearing is desired, arrangements may be made by writing or visiting the county department.

Penalties for Fraud. The state law provides penalties for persons found guilty of obtaining assistance for which they are not eligible by making false statements or by failing to report promptly any changes in their circumstances. If evidence indicates that any individual has willfully violated the law, he will be referred to the proper law enforcement authority for investigation and possible prosecution. Anyone who aids another person to obtain assistance fraudulently is subject to the same penalties.

Nondiscrimination. MA services are to be provided without discrimination on the basis of race, religion, color, natural origin, or political opinions. Any person who believes that he has been subjected to such discrimination may file a complaint or may request a hearing. The complaint or hearing request may be filed with the county department, State Department of Social Services, or the federal Department of Health, Education, and Welfare, Washington, D.C. A prompt investigation will be made and corrective action taken if discrimination is found.

Additional information about eligibility for MA or for any of the money-grant programs, may be obtained from the local county department of social services. On active authorized cases, however, physicians' questions about covered services or billings submitted for payment are to be directed to the fiscal agent, Michigan Blue Shield.

Someone acutely ill needs this bed.

t's available because of Medicenter.

Because of Medicenter, this hospital bed can be used someone who needs it. That's what Medicenter is l about. A recuperative care facility specializing in the eeds of patients who no longer require the intensive care a general hospital and who are on the road to recovery.

But that's only part of the Medicenter story . . . Beauti lly carpeted and draped patient rooms, tasty foods, rec ation facilities, physical and inhalation therapy are st a few of many luxurious health care features that ake recovery in the Medicenter as pleasant and rapid as possible. The Medicenter is within minutes of acute care facilities. A professional medical staff supervises all recuperative care under the direct orders of each patient's personal physician. Room rates are nominal — about one-half the cost of general hospitals. And there's a growing list of insurance companies that already provide coverage for Medicenter recuperation.

The Medicenter is a vital addition to our community's health care system. Get to know the Medicenter soon. Your visit or inquiry is welcome anytime.

MEDICENTER
OF AMERICA

A Nice Place to Get Well

Medicenter of America / Chelsea • Escanaba • Flint, Michigan

In memoriam

Robert H. Boman, MD
Detroit

Robert H. Boman, MD, Detroit psychiatrist for 11 years, died Nov. 4 at the age of 41.

Doctor Boman was a graduate of Wayne State University School of Medicine and began the private practice of psychiatry and child psychiatry in Detroit in 1960. He was affiliated with McGregor Hospital and served as a consultant to the Grand Rapids Child Guidance Clinic.

He belonged to the American Psychiatric Association, and the Michigan Society of Psychiatry and Neurology.

John D. Buck, MD
Saline

John D. Buck, MD, former Detroit physician who retired in 1951 to Saline, died Dec. 13 at the age of 83.

Doctor Buck was graduated from the former Detroit College of Medicine and Surgery and served as an Army doctor in World War II. He served as a justice of the peace and city council member in Saline.

Sylvester E. Gould, MD
Miami, Fla.

Former Detroit physician Sylvester Emanuel Gould, MD, died Nov. 29 in Miami, Fla., at the age of 70. Doctor Gould had been affiliated with the Jackson County Hospital in Miami since 1964.

Doctor Gould was graduated from the University of Michigan Medical School and was chief pathologist with the Wayne County General Hospital, where he served for 30 years.

Doctor Gould had been a delegate to MSMS from Wayne County. He was a professor of pathology at Wayne State University College of Medicine, former treasurer and trustee of the Detroit Institute of Cancer Research, former governor of the College of American Pathologists, editor-in-chief of the *American Society of Clinical Pathologists Journal,* editor of the *American College of Pathologists' Bulletin,* and a member of the American Association of Pathologists and Bacteriologists and the International Academy of Pathology.

Joseph L. Kubanek, MD
Dearborn

Joseph L. Kubanek, MD, former chief of psychiatry at Veterans Hospital in Allen Park, died Nov. 26 at the age of 74.

Doctor Kubanek was a professor emeritus at Wayne State University School of Medicine and had been chairman of the MSMS Section on Nervous and Mental Diseases in 1952.

A graduate of the University of Toronto School of Medicine, Doctor Kubanek was a member of the American Phychiatry Association, the Michigan Society of Neurology and Psychiatry, and the American College of Physicians.

Ivor E. Reed, MD
Detroit

Ivor E. Reed, MD, Detroit internist for 50 years, died Oct. 20 at the age of 74.

Doctor Reed was on the staff of Harper Hospital and was a member of the American College of Physicians. He obtained his MD degree from the University of Iowa College of Medicine. He belonged to the Michigan Society of Internal Medicine and the Michigan Association of the Professions.

Lloyd L. Savage, MD
Bradenton, Fla.

Lloyd Lionel Savage, MD, Caro, Mich. physician for over 30 years, died Nov. 30 at the age of 75. Doctor Savage had been residing in Bradenton, Fla.

A pharmacist early in his career, Doctor Savage was graduated from Wayne State University School of Medicine in 1928. He practiced four years in Detroit, then began serving in Caro in 1931. He was a former medical director of the Tuscola County Nursing Home. He was twice president of the Tuscola County Medical Society and served 15 years as delegate to the MSMS.

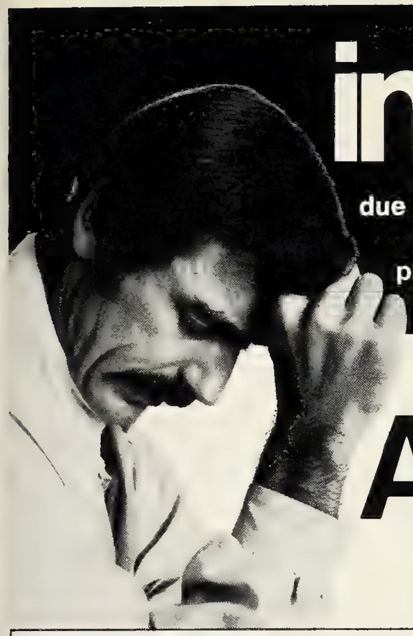
Doctor Savage also served as trustee of Caro Community Schools and health officer for Indianfields Township.

John D. Schmaltz, MD
Grosse Pointe

John D. Schmaltz, MD, a member of the staff of Detroit's Grace Hospital, died Nov. 25 at the age of 56.

Doctor Schmaltz was a graduate of the University of Michigan Medical School and belonged to the American College of Surgeons and the Detroit Urological Society.

(Continued on Page 170)



The treatment of

impotence

due to androgenic deficiency in the American male.
The concept of chemotherapy plus the
physician's psychological support is confirmed
as effective therapy.

NEW CLINICAL STUDY

The Treatment of Impotence
with Methyltestosterone Thyroid
(100 patients — Double Blind Study)
T. Jakobovits
Fertility and Sterility, January 1970
Official Journal of the
American Fertility Society

Android®
(thyroid-androgen) tablets

Double-Blind Study and Type of Patient:
100 patients suffering from impotence. Of the patients receiving the active medication (Android) a favourable response was seen in 78%. This compares with 40% on placebo. Although psychotherapy is indicated in patients suffering from functional impotence the concomitant role of chemotherapy (Android) cannot be disputed.

Choice of 4 strengths:

Android

Each yellow tablet contains:
Methyl Testosterone ..2.5 mg.
Thyroid Ext. (1/6 gr.) ..10 mg.
Glutamic Acid ....50 mg.
Thiamine HCL ....10 mg.
Dose: 1 tablet 3 times daily.
Available:
Bottles of 100, 500, 1000.

REFER TO PDR

Android-HP
HIGH POTENCY

Each red tablet contains:
Methyl Testosterone ..5.0 mg.
Thyroid Ext. (½ gr.) ...30 mg.
Glutamic Acid ....50 mg.
Thiamine HCL ....10 mg.
Dose: 1 tablet 3 times daily.
Available:
Bottles of 100, 500, 1000.

Android-X
EXTRA HIGH POTENCY

Each orange tablet contains:
Methyl Testosterone .12.5 mg.
Thyroid Ext. (1 gr.) ....64 mg.
Glutamic Acid ....50 mg.
Thiamine HCL ....10 mg.
Dose: 1 or 2 tablets daily.
Available:
Bottles of 60, 500.

Android-Plus
WITH HIGH POTENCY
B-COMPLEX AND VITAMIN C

Each white tablet contains:
Methyl Testosterone ..2.5 mg.
Thyroid Ext. (¼ gr.) ...15 mg.
Ascorbic Acid (Vit. C) .250 mg.
Thiamine HCL ....25 mg.
Glutamic Acid ....100 mg.
Pyridoxine HCL ....5 mg.
Niacinamide ....75 mg.
Calcium Pantothenate .10 mg.
Vitamin B-12 ....2.5 mcg.
Riboflavin ....5 mg.
Dose: 2 tablets daily.
Available: Bottles of 60, 500.

Contraindications: Android is contraindicated in patients with prostatic carcinoma, severe cardiorenal disease and severe persistent hypercalcemia, coronary heart disease and hyperthyroidism. Occasional cases of jaundice with plugging biliary canaliculi have occurred with average doses of Methyl Testosterone. Thyroid is not to be used in heart disease and hypertension.

Warnings: Large dosages may cause anorexia, nausea, vomiting abdominal pain, diarrhea, headache, dizziness, lethargy, paresthesia, skin eruptions, loss of libido in males, dysuria, edema, congestive heart failure and mammary carcinoma in males.

Precautions: If hypothyroidism is accompanied by adrenal insufficiency the latter must be corrected prior to and during thyroid administration.

Adverse Reactions: Since Androgens, in general, tend to promote retention of sodium and water, patients receiving Methyl Testosterone, in particular elderly patients, should be observed for edema.

Hypercalcemia may occur, particularly in immobilized patients: use of Testosterone should be discontinued as soon as hypercalcemia is detected.

References: 1. **Montesano, P., and Evangelista, I.** Methyltestosterone-thyroid treatment of sexual impotence. Clin Med 12:69, 1966. 2. **Dublin, M. F.** Treatment of impotence with methyltestosterone-thyroid compound. West Med 5:67, 1964. 3. **Titeff, A. S.** Methyltestosterone-thyroid in treating impotence. Gen Prac 25:6, 1962. 4. **Hellman, L., Bradlow, H. L., Zumoff, B., Fukushima, D. K., and Gallagher, T. F.** Thyroid-androgen interrelations and the hypocholesteremic effect of androsterone. J Clin Endocr 19:936, 1959. 5. **Farris, E. J., and Colton, S. W.** Effects of L-thyroxine and liothyronine on spermatogenesis. J Urol 79:863, 1958. 6. **Osol, A., and Farrar, G. E.** United States Dispensatory (ed. 25). Lippincott, Philadelphia, 1955, p. 1432. 7. **Wershub, L. P.** Sexual Impotence in the Male. Thomas, Springfield, Ill., 1959, pp. 79-99.

Write for literature and samples: BROWN **THE BROWN PHARMACEUTICAL CO., INC.** 2500 West 6th Street, Los Angeles, California 90057

Specialized ★ Service
IN
PROFESSIONAL LIABILITY INSURANCE
is a high mark of distinction
THE
MEDICAL PROTECTIVE COMPANY
FORT WAYNE, INDIANA
Professional Protection Exclusively since 1899

DETROIT OFFICE: R. K. Wind and J. K. Galloway, Representatives
27200 Lahser Road, Southfield 48075, Telephone: (Area Code 313) ELgin 3-4848 or 444-1439

GRAND RAPIDS OFFICE: G. J. Haworth, Representative
422 Federal Square Building, Grand Rapids 49502 Telephone: 616-454-4477

Classified Advertising

$5.00 per insertion of 50 words or less, with an additional 10 cents per word in excess of 50.

General Practitioner Retiring: Established southwest Detroit suburban practice. Near hospitals. Modern two suite office building, air conditioned. $35,000.00, including all equipment, supplies, records and practice. Terms available. Will stay to introduce if desired. Contact: Wm. S. Lovas, M.D., 3577 Fort Street, Lincoln Park, Michigan 48146.

FOR LEASE: In the Prairie Professional Building, located in the City of Grandville, Michigan. One suite on the ground floor containing 1220 feet of area. Will be developed to your exact requirements. Ideal for the Medical or Dental profession. Also, 2500 feet of area on the lower level with attractive enclosed entrance. Lease includes all services including paved parking. Reply to Prairie St. Realty Corp., 2700 28th Street, S.W., Grand Rapids, Michigan or phone (616) 538-9000 days or evenings (616) 457-9645.

Physician for private industrial clinic needed. Work is varied and includes much office surgery. Hours are regular with no night work. $30 to $35,000/annum to start with rapid advancement and in quick order entrance into a profit sharing plan. We also have a pension plan, insurance program, and liberal vacation policy. Please write or call: R. R. Silver, M.D., 24425 Hoover Road, Warren, Michigan 48089 (313) 756-5800.

NEW EXPANDING OPPORTUNITIES for family physicians and physicians specializing in pediatrics, internal medicine, anesthesiology; in medically-awakening community. Contemporary, automated, 105-bed, new hospital to be completed in the fall of 1970. Present hospital to be converted into long-term unit. Patient service area 50,000 people. Medical staff leading and supporting recruitment efforts. Excellent community location, forty miles equidistant to Milwaukee or Madison. Complete educational, cultural and recreational facilities. A new medical — dental building and a 130-bed skilled care nursing home being constructed adjacent to the new hospital ready for occupancy January 1971. Immediate satisfaction in practice, income and family living. Special assistance if needed. Write or call Paul R. Glunz, M.D., Watertown Memorial Hospital, 1301 E. Main Street, Watertown, Wisconsin 53094; Telephone (414) 261-4210 for more information.

PSYCHIATRIC RESIDENCIES: Excellent, approved psychiatric training; both demanding and clinically rich in a stimulating, well-organized program. The setting is a culturally satisfying community; the serene, scenic, Grand Traverse Bay area. Present salaries: 3 year plan ($11,359 - $11,922 - $12,925) ; 5 year plan ($12,945 - $14,950 - $17,393 - $23,198 - $24,409). Contact Dr. Paul E. Kauffman, Director of Psychiatric Training, Room 165, Traverse City State Hospital, Traverse City, Michigan 49684. An equal opportunity employer.

GENERAL PRACTITIONER for solo practice in a rapidly growing community in the heart of Michigan vacationland, near expressways. A non-profit corporation has been formed to help establish a doctor here. Contact: Ann Beltz Doctor's Committee, 9604 Madison, St. Helen, Michigan 48656.

PRISON PHYSICIAN 17: To fill immediate vacancy at the State Prison of Southern Michigan, Jackson. Salary range $23,469 to $28,731 annually. All Michigan civil service benefits. Must possess a license to practice medicine or osteopathic medicine and surgery in Michigan, plus five years of such experience. Send resume to Mr. Richard D. Crable, Chief, Recruitment and Placement, Michigan Department of Civil Service, Lansing, Michigan 48913. (MM) An equal opportunity employer.

ANN ARBOR—YPSILANTI AREA. 3 yr. AMA approved, university affiliated psych. residency at mental health center offering comprehensive services to SE Mich. Teaching faculty & supervisors include U. of M. faculty, private psychiatrists & analysts, as well as hospital staff. Resident's time divided approx. equally between didactic seminars (including supervision) & clinical experience. First year ADM & Intensive Treatment Units; second & third year assigned Community Psych. and/or OPC and/or Children's unit. Additional experience in psychosomatic medicine, Univ. Mental Hygiene Clinic, and neurology. 3-year: $11,358 to $12,924. 5-yr: $12,945 to $23,197. $15,000 NIMH grants & dependency allowance ($500 per) available to eligible physicians in practice 4+ years. Contact: J. Tiziani, M.D., Ypsilanti State Hospital, Ypsilanti, Michigan 48197.

MEDICAL AUDIT CONSULTANT. The Commission on Professional and Hospital Activities offers an excellent career opportunity for a physician interested in helping hospital medical staffs use PAS and MAP for evaluating the quality of medical care. The position involves designing educational media which use medical record data for evaluating and improving the quality of medical care. Interest in medical education and innovation in using medical data are key qualifications. Ability to work easily with physicians, hospital administrators and other health professionals is necessary. Skills in speaking and medical writing are definite assets. Other assets are some clinical practice and experience as a medical staff committee member or as a DME. Some travel will be required. Salary is competitive with excellent fringe benefits. For further information contact the Manager of Staff Development, CPHA, 1968 Green Road, Ann Arbor, Mi 48105.

FOR SALE: Cessna 310—Excellent condition inside and out. Full IFR except no radar or DME. Licensed until April 1971. Sacrifice $14,500. Detroit City Airport, George Sentas (313) LA 1-3042 or H. A. Davis, M.D., (313) DU 6-7676 or (313) DU 6-6330.

Established 1924

MERCYWOOD HOSPITAL

4038 Jackson Road
Conducted by Sisters of Mercy
Ann Arbor, Michigan
Telephone — 313 663-8571

Mercywood Hospital is a private neuropsychiatric hospital licensed by the Michigan Department of Mental Health. Mercywood specializes in intensive, multi-disciplinary treatment for emotional and mental disorders.

Accredited by the Joint Commission on Accreditation of Hospitals and the National League of Nursing. A full Blue Cross participating hospital.

Certified for: Medicare and M.A.A. programs

PSYCHIATRIC STAFF

Lyle M. Allis, M.D.
Robert J. Bahra, M.D.
Dean P. Carron, M.D.
Francis M. Daignault, M.D.
Gordon C. Dieterich, M.D.
James R. Driver, M.D.
Robert L. Fransway, M.D.
Stuart M. Gould, Jr., M.D.
Leonard E. Himler, M.D.*
Sydney Joseph, M.D.
Hubert Miller, M.D.
Jacob J. Miller, M.D.
Rudolf Nobel, M.D.
Gerard M. Schmit, M.D.
Richard D. Watkins, M.D.

*1904-1967

Ulcer Re-lief!

Dicarbosil®
ANTACID

Your ulcer patients and others will respond favorably to it. Specify DICARBOSIL 144's—144 tablets in 12 rolls.

ARCH LABORATORIES
319 South Fourth Street, St. Louis, Missouri 63102

Index to Advertisers

Arch Laboratories ... 169
Arnar - Stone Laboratories ... 109
Breon Laboratories ... 147
Bristol Laboratories ... 104, 105, 134, 135
Brown Pharmaceuticals ... 167
Burroughs-Wellcome & Co. ... 157
Campbell Soup Co. ... 129
Classified Ads ... 168
Fisher Bldg. ... 106
Geigy Pharmaceuticals ... 100
Hoechst ... 153
Hospital Planning, Inc. ... 136
Ingram, G. A. Company ... 151
Lilly, Eli and Co. ... 110
Medical Protective Co. ... 167
Medicenter of America ... 165
Merck, Sharp & Dohme ... 148, 149
Mercywood Hospital ... 169
Michigan Heart Association ... 107
Michigan Blue Cross-Blue Shield ... 98
National Drug Co. ... 141, 142, 175, 176
Poythress, Wm. P. ... 132
Riker Laboratories, Inc. ... 102
Robins, A. H. ... 143, 144, 145
Roche Laboratories ... 97, 137, 158, 159, Cover II, Cover IV
Searle, G. D., and Co. ... 130, 131
Smith, Kline & French ... 154
Squibb ... 156
Stratton, Ben P., Ins. ... Cover III
Stuart ... 162, 163
Upjohn ... 155
Walker Corp. and Co. ... 160, 161

Royce R. Shafter, MD
Birmingham

Royce Roemer Shafter, MD, Birmingham surgeon for 30 years, died Dec. 12 at the age of 70.

Doctor Shafter was affiliated with Detroit's Harper Hospital and was former owner and director of the Eastlawn Tuberculosis Sanatorium at Northville. He retired in 1962.

Doctor Shafter was a graduate of the University of Michigan Medical School and spent five years as a fellow in surgery at the Mayo Clinic, Rochester, Minn. He was a fellow of the American College of Surgeons and belonged to the Michigan Thoracic Society.

Ara D. Sharp, MD
Albion

Ara D. Sharp, MD, Albion surgeon for over 50 years, died Nov. 22 at the age of 79. Doctor Sharp was honored recently by MSMS for his 50 years of service.

Doctor Sharp was graduated from Vanderbilt University medical school and taught general surgery at the University of Michigan before locating in Albion. He was a former chief of the surgical staff at Albion's Sheldon Memorial Hospital.

Doctor Sharp was a fellow and life member of the American College of Surgeons and was a member of the Detroit Academy of Surgery.

Anthony R. Sirna, MD
Grand Blanc

Anthony R. Sirna, MD, medical director for the Chevrolet Manufacturing Plant and former Hurley Hospital chief of staff, died of a coronary thrombosis Nov. 16 at the age of 52.

Doctor Sirna became the medical director of Chevrolet in 1965 and was a past president of the Genesee County Medical Society. He headed the Genesee County Regional Drug Abuse Commission's new methadone treatment program.

Doctor Sirna was a member of the American Academy of Occupational Medicine, a fellow of the Industrial Medical Association and a member of the American Alcohol Society and the Flint Academy of Surgery.

He was a graduate of the St. Louis University School of Medicine.

Carlos C. Speck, MD
Allen Park

Carlos C. Speck, MD, life-long Detroit-area resident and general practitioner since 1937, died Oct. 25 at the age of 61.

Doctor Speck, a graduate of Wayne State University's School of Medicine, held appointments at Oakwood, People's Outer Drive and Wyandotte General Hospitals. He served part-time as Allen Park health officer and was active in the local and district organization of the Boy Scouts of America. He was also a member of the International Brotherhood of Magicians.

John W. Towey, MD
Escanaba

John W. Towey, MD, medical administrator of Pinecrest Tuberculosis Sanatorium in Escanaba for 38 years, died Nov. 28 at the age of 79.

Doctor Towey, a pioneer of tuberculosis treatment in the Upper Peninsula, was graduated from Northwestern University medical school. He was a past president of the Menominee County Medical Society, a member of the American College of Physicians and of the American Society of Internal Medicine, vice president of the American Thoracic Society in 1957, vice president of the American Association of Railroad Surgeons, president of the Mississippi Trudeau Society, and president of the Mississippi Valley TB conference in 1955.

Doctor Towey was honored with the bronze medal of the AMA in 1933, the Bruce Douglas medal of the Michigan Thoracic Society in 1958 and was elected an honorary member of the American Thoracic Society in 1967. He helped organize the annual Pembine Conferences and served as regional consultant for the VA on pulmonary diseases.

S. Willard Wallace, MD
Grosse Pointe

S. Willard Wallace, MD, retired Detroit-area physician, died Nov. 30 at the age of 79.

Doctor Wallace, a graduate of Johns Hopkins University medical school, was a member of the Jennings Memorial Hospital staff before his retirement. He was an internist and a member of the American College of Physicians.

The new manager of the MSMS Governmental Affairs Department, Bruce W. Ambrose, center, was formally introduced to members of the Legal Affairs Committee at their Dec. 17 meeting. Kenneth H. Johnson, MD, right, new chairman of the Legal Affairs Committee, made the introduction and presided at the meeting.

The Legal Affairs Committee continues as an important mainstay in the MSMS legislative program, making the initial studies of proposed legislation and presenting recommendations for action to the new Legislative Policy standing committee of The MSMS Council. Carrying on in their traditional role, members of the Legal Affairs Committee study summaries of important bills at their December 17 meeting. Leading the discussion is Mr. Ambrose.

An important part of the Dec. 17 meeting of the MSMS Legal Affairs Committee was a review of the revised Medical Practice Act as completed Nov. 30 in accordance with the Administrative Procedures Act 306 of 1969. Presenting the changes were C. Allen Payne, MD, Grand Rapids, standing, above, president, and John M. Wellman, MD, executive secretary of the State Board of Registration in Medicine (not shown).

Doctor Johnson, Mr. Ambrose Lead Legal Affairs Committee

REMINISCING

During the 92nd Annual Session of the Michigan State Medical Society in 1957, the head table for the Officers' Night dinner looked like this. Then-president George W. Slagle, MD, Battle Creek, is seated just in front of man standing.

Named "Michigan's Foremost Family Physician" in 1955 was Walter H. Winchester, MD, right, who was honored at a dinner by his Genesee County colleagues. Among the latter were Jackson E. Livesay, MD, left, then speaker of the MSMS House of Delegates, and Harold H. Hiscock, MD, center, current president of MSMS, who was then a councilor.

A large audience gathered for the July 17, 1954, dedication of the Beaumont Memorial Museum on Mackinac Island. The museum—on the exact site of the American Fur Company retail store in which Alexis St. Martin was wounded—was restored by voluntary contributions of Michigan doctors of medicine and presented to the people of Michigan. It honors the great early Michigan physician, William Beaumont, MD.

Activity ranged over the entire stage during the production of "The Strange Patient of Doctor Beaumont," which was presented by Radio Station WWJ, Detroit, during the 1952 MSMS Annual Session.

Michigan physicians at the AMA Clinical Convention

At the registration booth for the AMA Clinical Convention in Boston recently was John G. Wiegenstein, MD, Lansing, chairman of the board of directors of the American College of Emergency Physicians. Doctor Wiegenstein (receiving credentials) was among approximately 7,500 physicians and guests attending the annual convention.

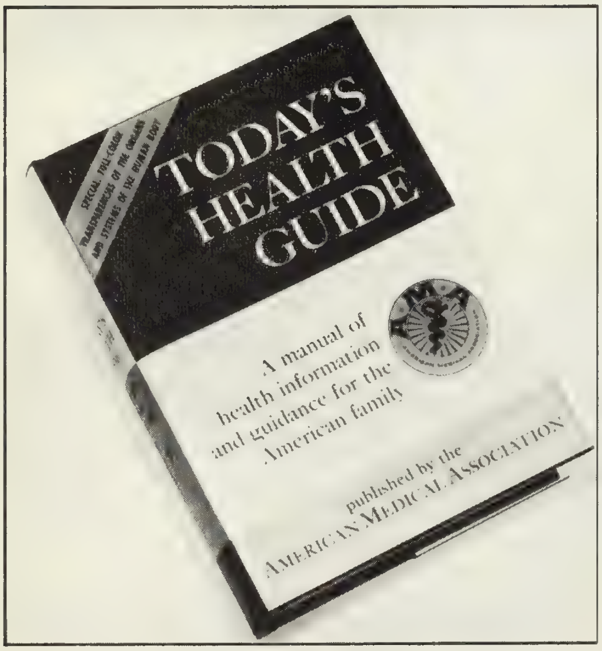
.V. Hydrocortisone
snake Bite

One of the many exhibits at the AMA Clinical Convention visited by Fenimore T. Johnson, MD, Augusta, left, was one on "Fasciotomy and I. V. Hydrocortisone for Severe Rattlesnake Bite," presented by Thomas G. Glass, Jr., MD, San Antonio, right. Part of Doctor Glass' exhibit was a rattlesnake skin.

CASE PRESENTATIONS

Detroit exhibitor Charles H. Hanson, right, of Henry Ford Hospital, explained the "Milwaukee Brace" to Gerald Hoeffel, MD, Chestnut Hill, Mass., as Doctor Hoeffel visited an exhibit on "Early Recognition of Scoliosis," one of the many displays at the Clinical Convention.

Flocks of sheep on the New Zealand plains create a scene Michigan physicians and their wives will enjoy while spending four days in New Zealand during the MSMS South Pacific Adventure leaving March 11. Today New Zealand lamb feeds Englishmen, North Americans and Japanese. The country's wool export—the second largest in the world—clothes Europeans and Americans. The MSMS South Pacific Adventure includes two sun-filled weeks in colorful and exciting New Zealand, Australia and Tahiti . . . all for the price of $998 complete! A deposit will assure you of a carefree, non-regimented adventure to the South Pacific!


SPECIAL FULL-COLOR TRANSPARENCIES OF THE ORGANS AND SYSTEMS OF THE HUMAN BODY
TODAY'S HEALTH GUIDE
AMA
A manual of health information and guidance for the American family
published by the AMERICAN MEDICAL ASSOCIATION

FOR YOUR PATIENTS:

Today's Health Guide is an up-to-date, 646-page, family health reference that should be in every home. The AMA's revised new book, Today's Health Guide, is the product of 200 of the world's most renowned authorities in medicine, science and allied fields.

The Guide discusses more than 2,000 illnesses, diseases and other medical subjects including diet and nutrition, child care, safety and first aid, sex education, mental health and when to seek professional medical attention. Over 300 striking illustrations and an eight-page full-color transparency of the human body vividly complement the text.

Your patients may obtain one by sending a check or money order for only $2.00 for each copy to the Michigan State Medical Society, P. O. Box 950, East Lansing 48823. The MSMS Committee on Public Relations has made a large-quantity purchase from the AMA and offers the fine publication at considerable savings to MSMS members and their patients.

The girth control pill

Tepanil® Ten-tab®

(continuous release form)

(diethylpropion hydrochloride, N.F.)

works on the appetite not on the 'nerves'

When girth gets out of control, TEPANIL can provide sound support for the weight control program you recommend. TEPANIL reduces the appetite—patients enjoy food but eat less. Weight loss is significant—gradual—yet there is a relatively low incidence of CNS stimulation.

Contraindications: Concurrently with MAO inhibitors, in patients hypersensitive to this drug; in emotionally unstable patients susceptible to drug abuse.

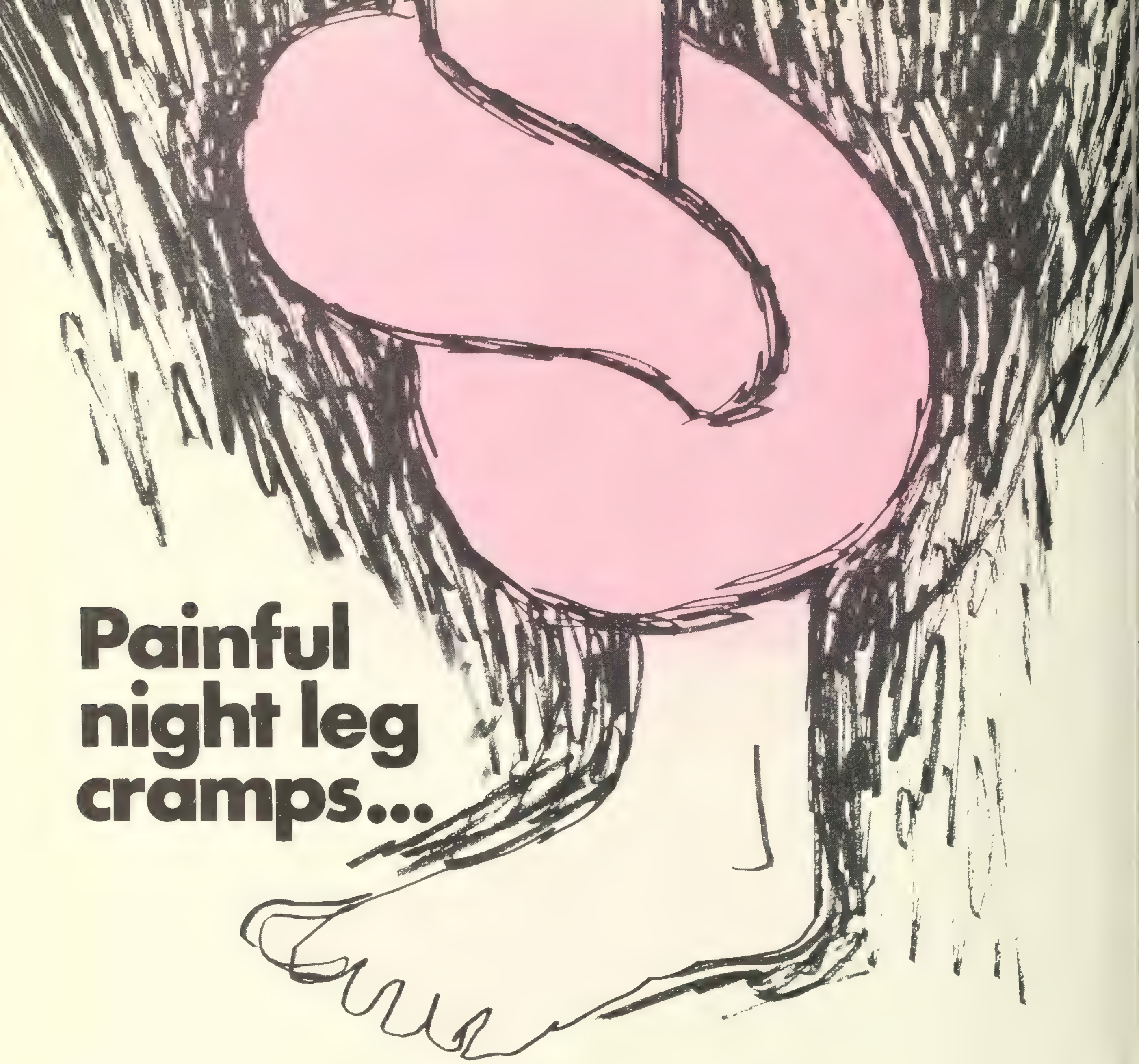
Warning: Although generally safer than the amphetamines, use with great caution in patients with severe hypertension or severe cardiovascular disease. Do not use during first trimester of pregnancy unless potential benefits outweigh potential risks.

Adverse Reactions: Rarely severe enough to require discontinuation of therapy, unpleasant symptoms with diethylpropion hydrochloride have been reported to occur in relatively low incidence. As is characteristic of sympathomimetic agents, it may occasionally cause *CNS effects* such as insomnia, nervousness, dizziness, anxiety, and jitteriness. In contrast, CNS depression has been reported. In a few epileptics an increase in convulsive episodes has been reported. Sympathomimetic *cardiovascular effects* reported include ones such as tachycardia, precordial pain, arrhythmia, palpitation, and increased blood pressure. One published report described T-wave changes in the ECG of a healthy young male after ingestion of diethylpropion hydrochloride; this was an isolated experience, which has not been reported by others. *Allergic phenomena* reported include such conditions as rash, urticaria, ecchymosis, and erythema. *Gastrointestinal effects* such as diarrhea, constipation, nausea, vomiting, and abdominal discomfort have been reported. Specific reports on the hematopoietic system include two each of bone marrow depression, agranulocytosis, and leukopenia. A variety of miscellaneous adverse reactions have been reported by physicians. These include complaints such as dry mouth, headache, dyspnea, menstrual upset, hair loss, muscle pain, decreased libido, dysuria, and polyuria.

Convenience of two dosage forms: TEPANIL Ten-tab tablets: One 75 mg. tablet daily, swallowed whole, in midmorning (10 a.m.); TEPANIL: One 25 mg. tablet three times daily, one hour before meals. If desired, an additional tablet may be given in midevening to overcome night hunger. Use in children under 12 years of age is not recommended.

T-103 / 2/71 / U.S. PATENT NO. 3,001,910

THE NATIONAL DRUG COMPANY
DIVISION OF RICHARDSON-MERRELL INC.
PHILADELPHIA, PENNSYLVANIA 19144



Painful night leg cramps...

unwelcome bedfellow for any patient—including those with arthritis, diabetes or PVD

One thing patients can sleep without, particularly patients with chronic disease conditions such as arthritis, diabetes or PVD, is painful night leg cramps. Although seldom the presenting complaint, night leg cramps can tie your patients up in painful knots. Now, just one tablet of QUINAMM at bedtime can usually bring an end to shattered sleep and needless suffering. Your patients will sleep restfully—gratefully—with QUINAMM, specific therapy to prevent painful night leg cramps.

Prescribing Information — Composition: Each white, beveled, compressed tablet contains: Quinine sulfate, 260 mg., Aminophylline, 195 mg. **Indications:** For the prevention and treatment of nocturnal and recumbency leg muscle cramps, including those associated with arthritis, diabetes, varicose veins, thrombophlebitis, arteriosclerosis and static foot deformities. **Contraindications:** QUINAMM is contraindicated in pregnancy because of its quinine content. **Precautions/Adverse Reactions:** Aminophylline may produce intestinal cramps in some instances, and quinine may produce symptoms of cinchonism, such as tinnitus, dizziness, and gastrointestinal disturbance. Discontinue use if ringing in the ears, deafness, skin rash, or visual disturbances occur. **Dosage:** One tablet upon retiring. Where necessary, dosage may be increased to one tablet following the evening meal and one tablet upon retiring. **Supplied:** Bottles of 100 and 500 tablets.

THE NATIONAL DRUG COMPANY
DIVISION OF RICHARDSON-MERRELL INC.
PHILADELPHIA, PENNSYLVANIA 19144

Quinamm™ Specific therapy for night leg cramps
(quinine sulfate 260 mg., aminophylline 195 mg.)

Q103

Michigan Medicine
Breaking News: Deadline, Jan. 27
February 1971, Volume 70, Number 3
Michigan State Medical Society

MSMS 'Key Man' Committee seeks 296 physician-volunteers

"Back home" are important words to politically-minded legislators.

Knowledge of that fact is the impetus behind the current revitalization of the MSMS "Key Man" Committee.

Through its component county medical societies, MSMS is seeking 296 "Key Man" physicians throughout the state to volunteer to develop a close, friendly, "back home" relationship with their legislators.

The "Key Man" concept, first conceived in 1966 but not yet developed to its fullest potential, will provide the vital link between developing MSMS legislative and government programs and action on the Lansing scene, according to Bruce Ambrose, manager, MSMS Government Relations Department.

It will provide a second powerful thrust to MSMS legislative work already sparked by the Medic-Corps volunteer lobbyist program begun in 1970 by MSMS.

Major activities of the Key Man Committee members, who will provide two physician contacts at home for each member of the Michigan Senate and Michigan House of Representatives, will be:

1) to meet occasionally with the legislator in his home district;

2) to become acquainted with MSMS legislative goals and relay them to the legislator;

3) to encourage the legislators to call local physicians about questions in the health and medical field;

(Continued on Page 179)

Capsules

MSMS is offering several cash prizes to the Michigan junior and senior high school students who win the 1971 Michigan Health Careers Poster Contest. The contest will be a major event of National Hospital Week, May 10-15.

The Michigan Health Council will sponsor the competition, the second annual such event. Deadline for entries is March 1 and entry blanks may be obtained from the Health Council in East Lansing.

* * *

The Population Control Workshop for invited county medical society leaders originally scheduled by MSMS for Jan. 28 has been postponed until March 4. It will be held at MSMS Headquarters.

* * *

MSMS has urged Governor Milliken to reappoint or reactivate the Michigan Youth Commission . . . and has received a recent reply that "This recommendation is being reviewed in connection with the work of the Michigan Committee of the White House Conference on Children and Youth."

Leaders of specialty organizations in Michigan have met twice recently with Harold H. Hiscock, MD, center, 1970-71 MSMS president. Their topic has been the economics of medical care. Prior to the first meeting, Doctor Hiscock chatted with Gaius D. Clark, MD, East Lansing, MD, left, president, Michigan State Chapter, American College of Emergency Physicians, and James F. Dooley, MD, Flint, president, Michigan Academy of General Practice.

CAPSULES/Cont.

The directors of two major health departments in the state have left their posts.

Robert L. Loftin, MD, has resigned as director of the Saginaw County Health Department, effective Dec. 16, 1970, and Thomas P. Hamilton, II, MD, has resigned as acting director of Wayne County Health Department.

* * *

The Second Conference on Drug Abuse will be sponsored Feb. 24 at Wayne County Medical Society headquarters by Wayne State University and the Lafayette Clinic in Detroit. Category I credit will be granted to AAGP members attending the course.

Topics to be discussed will be the pharmacology of drug abuse, drug abuse and acute poisoning, medical complications of drug abuse, addiction and pregnancy, community treatment of heroin addiction, addiction in the community and drug abuse in Canada.

Conference chairman is Paul Lowinger, MD, associate professor in the department of psychiatry at Wayne State University.

* * *

The State Board of Education has appointed Dr. John W. Porter Superintendent of Public Instruction through June 30, 1973.

Porter, 39, has been serving in the post since October 15, 1970, and for one year prior to that was Acting Superintendent of Public Instruction under appointment by the Board.

* * *

Parke, Davis and Company has announced the promotion of Stephen N. Preston, MD, to director of clinical investigation.

Doctor Preston, 56, joined Parke-Davis in April, 1969, as associate director, clinical therapeutics, in the clinical investigation department. He was promoted to director, clinical therapeutics in June, 1970, the post he held until his present appointment.

* * *

Wayne State University is offering a 10-week course be-

Many requests are received every day at the MSMS Headquarters from MSMS members and the public, asking for all types of information and assistance. During 1971, some of these letters will be published from time to time because they may be of interest to all members. Following is one of the letters and the MSMS reply:

REQUEST FROM BORGESS HOSPITAL, KALAMAZOO

Am interested in obtaining the following information from you: (1) What is the total number of Black physicians in Michigan? and (2) What is the percentage and number of Black students at the three Michigan medical schools? Am requesting this information as we want to determine how many doctors are available to bring into our community. Any assistance you can give us will be appreciated.

—R. R. Springgate, MD
Director of Medical Education

REPLY TO QUESTIONS ABOUT BLACK DOCTORS AND MEDICAL STUDENTS

Have made the contacts to obtain the information you requested:

Re Question #1 about how many black doctors in Michigan: the State Board of Registration of Medicine keeps no records on the number of white, black, yellow or Indian physicians in Michigan.

Re Question #2 about black students in Michigan medical schools: University of Michigan has 60 black students enrolled in medical school; for 7 per cent of total enrollment of 857. Wayne State University has 37 black students enrolled; for 6.5 per cent of total of 565. Michigan State University has 8 black students in regular medical school programs; for 6.9 per cent of total of 115 students. All three schools have additional black students enrolled in special medical preparatory programs in efforts to increase the number of qualified medical students.

Medical Protective raises all rates

The Medical Protective Company of Fort Wayne, Ind., a major holder of professional liability insurance for Michigan physicians, has announced raises in its rates for physicians in areas I and II of Michigan.

Area I rates apply in only Wayne, Genesee and Oakland counties, while Area II rates affect all counties except Wayne, Genesee and Oakland.

The new rates, in Area I, by class, are:

Class I: $176
Class II: $263
Class III: $1063
Class IV: $1625
Class V: $2434

The new rates, in Area II, by class, are:

Class I: $176
Class II: $263
Class III: $782
Class IV: $1217
Class V: $1625

Continuing Rubella immunization subject of MDPH meeting

How best to reach the estimated 1,000,000 Michigan children still susceptible to and not yet immunized against rubella was the topic of a meeting called Jan. 7 by the Michigan Department of Public Health.

Supervising the meeting of representatives of private and voluntary health agencies concerned with rubella and other immunizations were T. R. Ervin, associate director for administration, MDPH, and Donald Coohon, DVM, chief, Communicable Disease Division, MDPH.

One million children aged 1-11 have been reached in the past year's all-out campaign against rubella waged primarily through school clinics by the Health Department. Eighty percent of the children in grades K-3 were immunized, according to Mr. Ervin.

There remain the additional million children, particularly those aged 1 to 5, in this year's new kindergarten class and of preschool age, yet to be immunized, he said.

Of primary importance in reaching the susceptible children, it was emphasized, is the cooperation of parents and private physicians. The vaccine may be obtained free of charge from local health departments by any physician desiring to provide immunizations in his own office.

MSMS 'KEY MAN' COMMITTEE/Cont.

4) to be prepared to telephone legislators with information at crucial moments;

5) to assure the legislator that he has a doctor of medicine in his home district interested in him, and

6) to attend an annual MSMS legislative dinner in Lansing, at which the physicians will play hosts to their legislators.

MSMS Key Men can appropriately prepare lawmakers for the kind of legislation they must deal with in the health area in Lansing; they can offer ongoing guidance through the legislative process; they can provide last-minute direction as a bill comes to a vote, according to Mr. Ambrose.

Physicians who know a state representative or legislator well and would like to serve as his MSMS "Key Man" are invited to contact Mrs. Sherry Hall, Department of Government Relations, MSMS headquarters.

Henry Cook, MD, Dies

Former MSMS Past President Henry Cook, of Flint, died Jan. 17 at the age of 84. Doctor Cook, who served as MSMS president in 1937-38, was voted Michigan's outstanding physician in 1967. Further details will follow in the March issue of *Michigan Medicine.*

CAPSULES/Cont.

ginning Feb. 9 entitled Radiation: Theory, Application and Side Effects. Part of the course will deal with medical uses of radiation such as radiography and nuclear medicine techniques of diagnosis and therapy.

Instructor will be Glenn Knoll, PhD, associate professor of nuclear engineering, the University of Michigan and formerly a consultant to the nuclear medicine unit at University Hospital, Ann Arbor. Doctor Knoll is currently doing research on instrumentation in nuclear medicine and radiation measurement.

* * *

A birth defects center is being opened this month in Hutzel Hospital, Detroit, offering the first genetic counseling service available in the city. The center will be financed by a two-year grant of $51,620 awarded Wayne State University School of Medicine by the Metropolitan Chapter of the National Foundation March of Dimes. The center will eventually be housed in the C. S. Mott Center for Human Growth and Development, to be built in the Detroit Medical Center.

T. N. Evans, MD, acting dean of the WSU School of Medicine and chairman of the WSU Department of Obstetrics and Gynecology, will be program director for the center.

Proceedings of 1970 MSMS House of Delegates were mailed Jan. 5 to all MSMS members as a special issue of **Michigan Medicine.** Save the issue for reference.

Two major appointments have been made in the faculty of the Wayne State University School of Medicine.

Tommy N. Evans, MD, acting dean, has appointed L. Murray Thomas, MD, chairman of the Department of Neurosurgery and Arnold M. Weissler, MD, professor of medicine at Ohio State University, chairman of the WSU Department of Internal Medicine.

Doctor Weissler, director of cardiology at Ohio State, will begin his duties July 1. He will also become chief of medicine at Detroit's Harper and General Hospitals and will be in charge of academic programs involving the Department of Internal Medicine at all other hospitals affiliated with the WSU School of Medicine.

Doctor Thomas was appointed acting chairman last July of the WSU Department of Neurosurgery. He replaced Elisha S. Gurdjian, MD, who retired. Doctor Thomas served as assistant chairman from 1965 to 1970.

* * *

Plans are nearly complete for the annual Spring Conference of the Woman's Auxiliary to MSMS. The conference is scheduled April 28-29 at the Sheraton Motor Inn in Pontiac.

The conference will have an exercise and physical fitness theme, in keeping with the national program emphasis for 1971 of the Woman's Auxiliary to the AMA. On the program will be a talk by F. P. Rhoades, MD, Detroit, (Mrs. Rhoades is president of the Woman's Auxiliary to MSMS), who will advise the women on prolonging femininity.

Mrs. G. R. Diessner, director of the Woman's Auxiliary to the AMA, and Edward Leibson, Detroit, director of Narcotics Addiction Rehabilitation Coordinating Organization, will address the group. A special luncheon speaker will be Mrs. William G. Milliken, who will discuss pollution.

1971 Poison Prevention Week Scheduled March 21-27

Throughout the month of February, Michigan physicians will be focusing their educational efforts to prevent accidental poisoning. Their pleas for ensuring the safety of those who would inadvertently injure themselves through poisonous substances, will climax March 21-27, designated as National Poison Prevention Week.

It is particularly important that Michigan physicians speak during this time to mothers and young children about the dangers of poisonous materials, points out Robert J. Mason, MD, Birmingham pediatrician and immediate past president of MSMS, and director of the Poison Control Center at St. Joseph Hospital, Pontiac.

Over 75 percent of the more than 100,000 persons in the U.S. involved in accidental poisonings each year are children under the age of five.

According to the Children's Hospital Medical Center of Boston, today there are over 250,000 potential poisons which can be bought in neighborhood stores. Aspirin is by far the most common poison.

Physicians around the nation, along with pharmacists and fellow members of other health professions, will join forces during National Poison Prevention Week to alert the public.

Among the major tips Doctor Mason offers to help people avoid accidental poisonings, are the following:

____Keep household products and medicines out of the reach and out of sight of children;

____Store medicines separately from household products. Never put cleaning materials or other toxic products in cups or soft drink bottles;

____Be sure that all products are labeled properly, and read the label before using;

____Always turn the light on when giving or taking medicine;

____Since children tend to imitate adults, avoid taking medicine in their presence;

____Never call medicine "candy," and

____Clean out the medicine cabinet periodically.

Michigan physicians hold state posts

Five Michigan physicians have been appointed to two Michigan governmental agencies.

The agencies and the physicians are:

State Board for Marriage Counselors—Dean Carron, MD, Ann Arbor, for a term expiring June 21, 1972;

State Advisory Council on Mental Health Services—Benjamin Jeffries, MD, Harper Woods, for a term expiring Aug. 31, 1974; Stuart M. Finch, MD, Ann Arbor, for a term expiring Aug. 31, 1973; George D. Maniaci, MD, Gladstone, for a term expiring Aug. 31, 1972, and Edward H. Rodda, MD, Bay City, for a term expiring Aug. 31, 1971.

U. C. SAN FRANCISCO
MEDICAL CENTER LIBRARY

MAR 15 1971

Michigan Medicine

News Extra: Deadline, Feb. 12
February 1971, Volume 70, Number 5
Michigan State Medical Society

Legislature receives several bills of medical interest

Several items of significance to physicians have been introduced in the 1971 Legislature. They are under scrutiny by the MSMS Legal Affairs Committee, which is preparing recommendations for action to be presented to the new MSMS Legislative Policy Committee.

Among the most important items of interest is the first "Physician's Assistant" bill. Rep. Jackie Vaughn (D-Detroit) is chief sponsor of House Bill 4056, a copy of the California Physician's Assistant bill.

The proposal, referred to House Committee on Public Health, would amend the Medical Practice Act to permit the Board of Registration in Medicine to license and regulate physician's assistants. It limits physician's assistants' authority in measurements of vision and prescribing and/or fitting optical devices, and in dentistry. Chairman of the Public Health Committee is Rep. Raymond Hood (D-Detroit).

MSMS is urging a deliberate approach to implement the Physician's Assistant concept. Consensus as to licensing, training, parameters of work, relationship to other professionals, and regulations has not been reached. MSMS is encouraging the study by Western Michigan University designed to develop a curriculum for degree work as Physician's Assistant at that university. The MSMS Legal Affairs Committee will review Rep. Vaughn's bill at the forthcoming meetings.

HB 4018, introduced by Rep. Huffman and referred to Public Health Committee, would re-establish comprehensive health planning commission and comprehensive health planning advisory council on a statutory basis, as contrasted to present executive order. Director of the Comprehensive Health Planning Commission would be the Director, State Department of Public Health.

HB 4085, introduced by Rep. Smit and referred to Public Health Committee, would extend the liability protection of "Good Samaritan" Acts to attendants in ambulances, and to "any physician or nurse who renders medical instructions under such circumstances, through any type of communication device."

HB 4104, introduced by Rep. Mrs. Elliott and referred to Committee on Youth Care, would require doctors, teachers, social workers, and other case finders to report suspected cases of child abuse to police or sheriff and Social Services Department. Willful refusal to report cases would be a misdemeanor.

Senate Bill 3, introduced by Sen. Bursley and referred to Senate Committee on Health, Social Services and Retirement,

(Continued on page 184)

CAPSULES

Michigan State University will retain a federal grant offer of $17.3 million toward construction of a campus teaching hospital following a review by HEW. The grant was tentatively approved in the spring. The university must provide an additional $16 million in matching funds before the federal grant becomes operable.

* * *

MSMS will be represented at three AMA meetings coming up soon in Chicago. Herbert A. Auer, MSMS staff, will attend the 67th Annual Congress on Medical Education to be sponsored Feb. 11-15; Winslow G. Fox, MD, chairman, MSMS Committee on Medicine and Religion, will attend the Feb. 13 Regional Conference on Medicine and Religion, and C. Howard Ross, MD, MSMS representative on the State Advisory Council on Aging, will attend the Meeting of Medical Society Representatives re White House Conference on Aging, March 21.

* * *

MSMS President Harold H. Hiscock, MD, has appointed two MSMS members to two state boards. John W. Grigg, MD, Bay City is new MSMS representative on the Advisory Council of the Board of Hearing Aid Dealers, and Robert E. Rice, MD, Greenville, replaces H. J. Meier, MD, Coldwater, on the Medical Care Advisory Committee, with approval of those bodies.

* * *

Elena Padilla, MD, acting director since January, 1970, of the State Office of Comprehensive Health Planning, has resigned her post. Doctor Padilla has agreed to stay on, however, until a replacement is named. Doctor Padilla is also a professor of psychiatry at Michigan State University.

* * *

The seventh annual Northern Michigan Summer Course is scheduled by the University of Michigan at Shanty Creek Lodge, Bellaire. Designed for the practicing physician, the course will present recent advances, developments and techniques that apply to the diagnosis and treatment of problems commonly encountered by the family physician. Further information and a detailed course outline may be obtained from the Department of Postgraduate Medicine, Towsley Center for Continuing Medical Education, Ann Arbor, 48104.

* * *

The Michigan Association of the Professions has added the professions of school administrator and optometrist to its roster of professions. The Michigan Congress of School Administrator Associations and the Michigan Optometric Association have been received as MAP State Organization Members.

CAPSULES/Cont.

Research on combating cancer with drugs is the topic of the annual Johnson Lecture scheduled Feb. 19 at the University of Michigan Medical Center. Speaker will be Charles Heidelberger, PhD, of the University of Wisconsin. The Johnson Lecture series is named in honor of a Flint, Mich., publisher who has been one of the leading supporters of cancer research.

* * *

Psychiatrists and allied professionals are invited to attend a visiting lecture Feb. 24 at Northville State Hospital. The topic will be "Molecular Coding of Information in the Nervous System," and the speaker is George Ungar, MD, DSc, professor of pharmacology at Baylor College of Medicine.

* * *

Sarah Schooten, MD, Detroit, 1970 MSMS Certificate of Commendation recipient, sends a postcard from Kenya. At the age of 76, she left Jan. 14 to spend two weeks in Kenya assisting in a measles inoculation of Masai children. She writes, "When we finished our work in Nairobi and suburbs, we went with the flying doctors to the bush up to border of Samolia and Ethiopia to vaccinate against cholera. Did over 6,000 in four hours. Some had been traveling all night. Glad I came; will be glad to go home."

* * *

Winslow Fox, MD, Ann Arbor, chairman of the MSMS Committee on Medicine and Religion, attended the 19th annual Prayer Breakfast in Washington, DC, sponsored Feb. 2 by the congressmen.

* * *

The Michigan Association for Regional Medical Programs has transferred the "Electronic Surveillance" project of Wayne State University to the Michigan Heart Association, and has approved a request for expanded funds for the project.

* * *

The University of Michigan Medical Center has banned cigarette vending machines from its hospitals, medical school and research facilities as of Feb. 1.

* * *

A young New Jersey schoolgirl sent a letter to MSMS Headquarters which the MSMS staff will do their best to respond to. Wrote Miss Anne Moore, "Please send me information on Health in Michigan. If you have any photographs, please send me them, too." That's all.

* * *

Construction of a new, $4 million cancer research facility in Detroit has been approved by the Michigan Cancer Foundation board of trustees. The five-story building with a penthouse laboratory for cancer virus research, will adjoin the present two-story MCF center. Construction of the building will begin this spring.

* * *

The Children's Hospital of Michigan will stage its 14th annual Clinic Days

WMU seeks federal funds for physician assistant program

Western Michigan University has applied to the National Institute of Health for funding of its proposed training program for the preparation of physicians' assistants.

The WMU application has gone to the Division of Allied Health and Manpower, Bureau of Health Manpower Education of the NIH, under Public Law 91-519, Title II, described as "Special Projects for Experimentation, Demonstration and Institutional Improvement."

WMU plans to prepare type A physicians assistants as defined by the Ad Hoc Panel on New Members of the Physicians Health Team of the Board of Medicine of the National Academy of Sciences.

The Type A assistant, thus defined, may gather historical and physical data, perform diagnostic and therapeutic procedures, coordinate the roles of other, more technical assistants, and, on occasion, work without the immediate surveillance of the physician.

A very tentative schedule of WMU plans calls for:

Sept. 1, 1971-Aug. 31, 1972—a planning year, to select a director, complete arrangements for clinical experiences, recruit students, seek financial support and work on details for transferability of credits;

Sept. 1, 1972-Aug. 31, 1973—a pilot year, four to six students to be admitted and the program started;

Sept. 1, 1973-Aug 31, 1974—10 more students to be admitted, and

Sept. 1, 1974-Aug. 31, 1975—16 more students to be admitted, with 16 more the following year.

MSMS officers re-elected

Three MSMS officers were re-elected at the Feb. 3 meeting of The Council. They are Kenneth H. Johnson, MD, secretary; John R. Ylvisaker, MD, Detroit, treasurer, and C. Allen Payne, MD, Grand Rapids, assistant treasurer.

Warren F. Tryloff was reappointed MSMS director.

Elections for the offices of assistant secretary, scientific editor, and board of managers was deferred until the March 10 meeting. The meeting had been rescheduled due to bad weather on the scheduled date of Jan. 27.

Doctor Hamburg continues as Blue Shield chairman

Robert H. Hamburg, MD, Detroit, has been re-elected chairman of the board of Michigan Medical Service. Others elected at a Feb. 3 meeting are Earl E. Conlin, vice chairman; William B. Jensen, MD, vice chairman; Carl H. Morgenstern, treasurer; Dan E. Reed, secretary; Paul Piellusch, assistant treasurer; Albert Kaufman, assistant secretary; Brian P. MacRae, assistant secretary; John C. McCabe, president, and Robert L. Novy, MD, emeritus president.

A quartet of distinguished Michigan physicians presented a workshop on disabling neurological diseases at the Kellogg Center for Continuing Education in East Lansing. Attending the workshop were students from MSU College of Human Medicine and the Schools of Social Work and Nursing. Above, Max Karl Newman, MD, director, Detroit Institute of Physical Medicine and Rehabilitation, addresses the crowd.

Richard W. Pomeroy, MD, director of medical education, Lansing's E. W. Sparrow Hospital, was morning session chairman. Another speaker was John Gilroy, MD, chairman, Department of Neurology, Wayne State University School of Medicine.

Arnold Werner, MD, assistant professor of psychiatry and director, psychiatric services, Olin Health Center, MSU, shared Doctor Newman's topic of the physical and psycho-social effects of neurological diseases.

Michigan RVS updating to begin

The MSMS Relative Value Study Committee will hold hearings in April and May to receive recommendations from representatives of MSMS sections and their specialty organizations for unit values for procedures appropriate to their specialties.

The hearings will be held because the MSMS House of Delegates has authorized the updating of the Michigan Relative Value Study (MRVS) utilizing the coding and nomenclature of the AMA's *Current Procedural Terminology* (CPT).

The Relative Value Study Committee in its deliberations will be guided by the 1967 MSMS House of Delegates which approved a $5 conversion factor for the MRVS and the concept that there should be complete separation of the four major MRVS sections (medicine, surgery, pathology and radiology).

CAPSULES/Cont.

May 20 and 21, honoring Children's Hospital of Michigan residents. Chairman of the event, which will utilize the facilities of the new Hospital building, is Paul V. Wooley, Jr., MD.

* * *

Charles F. Wagg, for 23 years director of state programs for the mentally ill and mentally retarded, retires Feb. 28. Mr. Wagg served as director of the Department of Mental Health from 1949 to 1964.

* * *

A former Michigan State University premedical student from Charleston, S.C., Delano Meriwether, MD, now 27, has become one of the world's fastest men. Doctor Meriwether, a Duke University graduate, won the finals of the 60-yard dash Jan. 8 at the National Invitational Meet in College Park, Md., in six seconds flat. Doctor Meriwether had never run competitively until last summer and most of his training had been weekly jogging sessions without the advice of a coach.

County Societies are invited to send representatives to the

CONFERENCE ON PREGNANCY AND POPULATION PROBLEMS

Thursday, March 4, 1971
MSMS Headquarters

This informational meeting is sponsored by the Committee on Maternal and Perinatal Health of the State Society. The meeting will begin at 9:30 am, continue through luncheon and adjourn at about 4 pm.

Four speakers will be present to discuss the somewhat controversial topics of the LaMaze Technique in labor; developments in the intrauterine device; the unwanted pregnancy; and, techniques of therapeutic abortion.

Post cards are being sent to county societies to aid in designating their representatives.

CAPSULES/Cont.

A second election within a month is planned by March 5 in an attempt to unionize the employees of Henry Ford Hospital, Detroit. In a Feb. 3 election, Local 79 of the Service Employees International Union received 658 votes, two short of the 660 needed to become the workers' bargaining agent. Officials at Ford Hospital were planning to protest the Feb. 3 election with the State Labor Board. If the protest is approved, the resulting public hearings could delay another election for six months or more.

MSMS Sports Conference Set April 22 at MSU

The Sixth Annual Conference on the Medical Aspects of Michigan High School Sports will be held at Michigan State University, Thursday, April 22.

Several hundred Michigan high school and college coaches, team physicians, trainers, principals and others are expected to participate in the workshop.

The all-day conference with speakers and demonstrations will be held at Kellogg Center. James Feurig, MD, director of the MSU Student Health Services, will serve as the conference program chairman.

County societies' topic to be health manpower

The MSMS Committee on Medical Socio-Economics wishes to alert county medical societies to the ramifications of the Emergency Health Manpower Act of 1970, discussed at the Feb. 10 meeting of the committee.

Under the new act, county societies, along with the state society, must certify the need for additional health manpower in their areas before additional health personnel will be assigned to the area by the U. S. Public Health Service.

NEW LEGISLATIVE ITEMS/Continued

would permit termination of a pregnancy upon mutual agreement of patient and physician before four lunar months from conception. The bill provides for protection from liability in abortion cases.

SB 18, introduced by Sen. Faust and referred to Committee on Judiciary, would regulate possession, sale, delivery and distribution of syringes, hypodermic needles, and other "instruments adapted for the use of narcotic drugs." The bill exempts physicians, and provides that patients of physicians may be certified to have devices in their possession.

SB 26, introduced by Sen. Richardson, and referred to Committee on Judiciary, would reduce content of alcohol in blood to .10 per cent from current .15 per cent for presumption of drunkenness under State Vehicle Code.

Michigan
Medicine

MICHIGAN STATE MEDICAL SOCIETY

Published semi-monthly, Trimonthly in December and January, 26 issues, by the Michigan State Medical Society as its official journal. Second class postage paid at East Lansing, Mich. and at additional mailing offices. Yearly subscription rate, $9.00. Printed in USA. All communications should be addressed to the Publications Committee, Michigan State Medical Society, 120 West Saginaw Street, East Lansing, Michigan 48823. © 1971 Michigan State Medical Society. Phone: Area Code 517, 337-1351.

Second Class Postage Paid at East Lansing, Mich.
and at additional mailing offices.

UNIVERSITY OF CAL
LIBRARY SCH OF MED
THIRD & PARNASSUS AVE
SAN FRANCISCO CAL 94122

Attention Librarians: This publication is a regular issue of MICHIGAN MEDICINE and should be saved for binding later with the larger scientific issues of the journal.

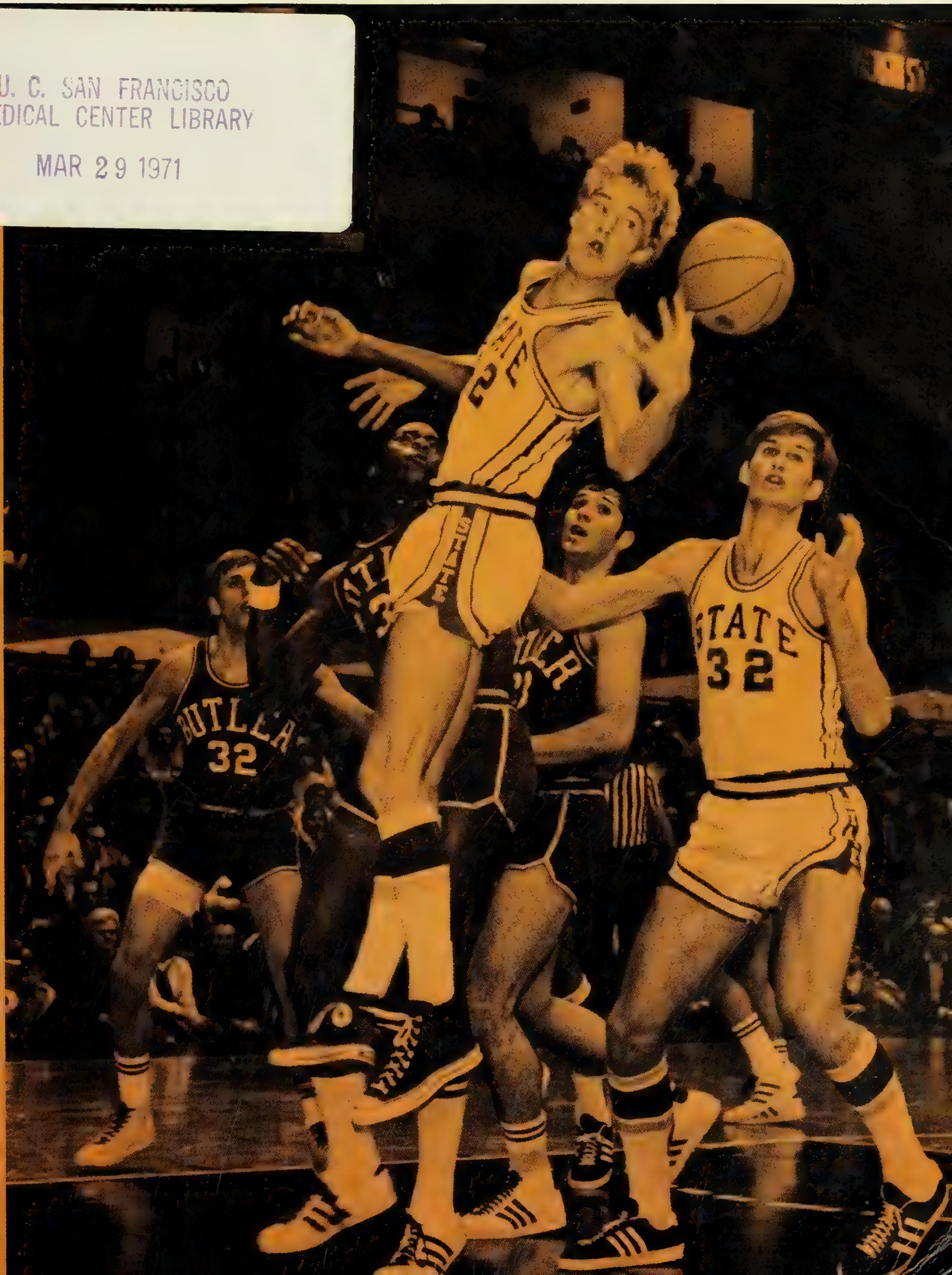
RECOMMENDED READING:

The Michigan physician and his education
Mr. Tryloff discusses MSMS staff reorganization
Judicial Commission report on professional ideals

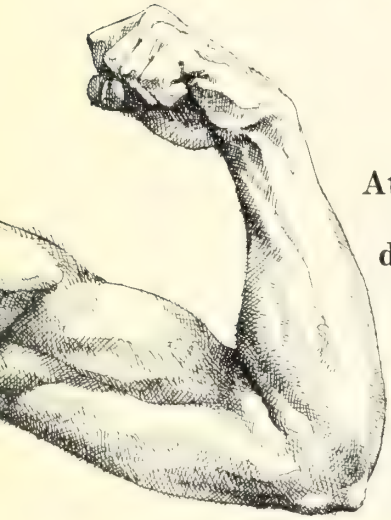
Michigan Medicine

U. C. SAN FRANCISCO
MEDICAL CENTER LIBRARY
MAR 29 1971

Michigan
doctors,
coaches,
and team
trainers
ill attend
the
h Annual
MSMS
onference
n Medical
spects of
gh School
Sports,
April 22,
t Lansing



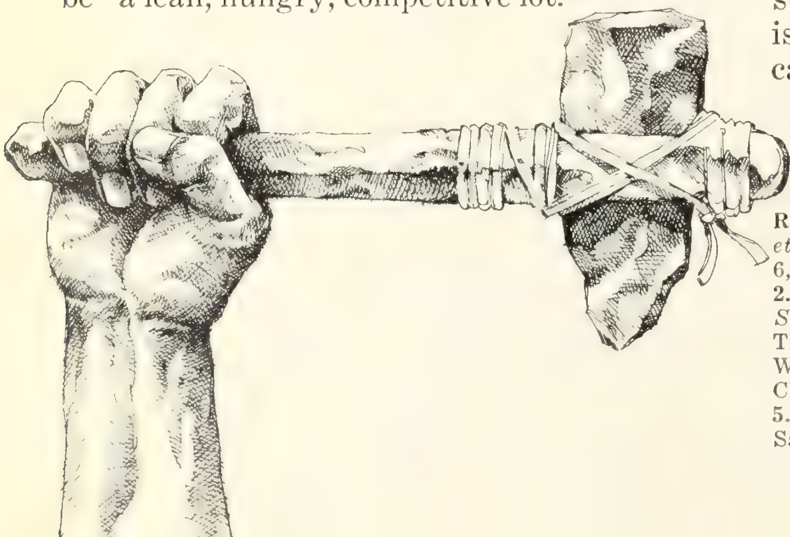
IF MORE MEN CRIE



At least seventy-five out of one hundred adults with duodenal ulcers are men.[1] Why? It may be significant that duodenal ulcer patients tend to crave recognition and are "especially vulnerable to threats to their manly assertive independence."[2]

Hypersecretion—an atavistic response. Stewart Wolf, who, with Harold G. Wolff, studied the personalities of duodenal ulcer patients, wonders if masculine competitiveness is related to "an atavistic urge to devour an adversary." It is striking, he reports, that an accentuation of gastric acid secretion and motility can be "induced in ulcer patients by discussions that arouse feelings of inadequacy, frustration and resentment."[2]

By chance? A lean, hungry lot. Was the link between emotions and gastric hyperacidity acquired through mutation to serve a purpose? During man's jungle period of evolution, the investigator points out, a male dealt with a foe by killing and devouring it. "It may be more than coincidence," he concludes, that peptic ulcer patients appear to be "a lean, hungry, competitive lot."[3]



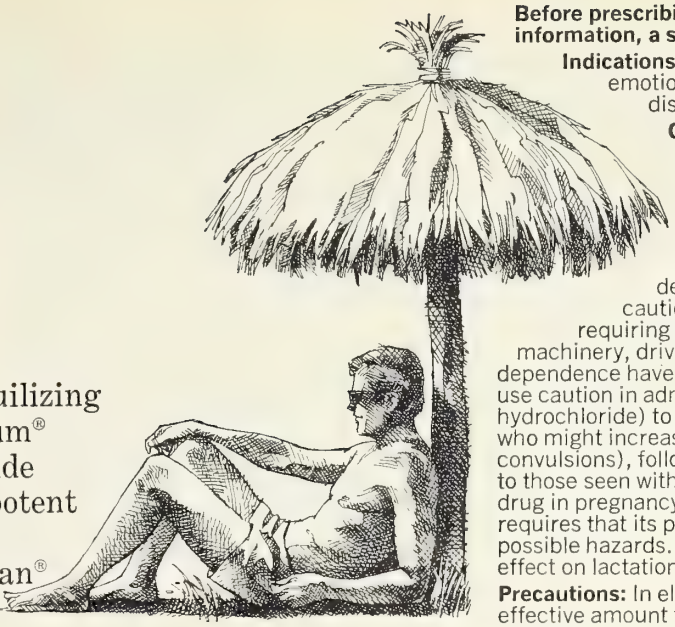
Big boys don't cry. If more men cr
maybe fewer would wind up with duod
ulcers. But men will be men—the sum tota
their genes and what t
are taught. Schottsta
observes that whe
mother admonishes
son who has hurt him
that big boys don't cry,
is teaching
stoicism.[4] Crying is
negation of everyth
society thinks of as ma
A boy starts defending
manhood at an early

Take away str
you can take away sympto

There is no question that stress play
role in the etiology of duodenal ulc
Alvarez[5] observes that many a man with
ulcer loses his symptoms the day he shuts
the office and starts out on a vacation.
problem is, the type of man likely to have
ulcer is the type least likely to take l
vacations or take it easy at work.

The rest cure vs. the two-way action
Librax.® For most patients, the rest cur
as unrealistic as it is desirable. Still,
stress factor must be dealt with. And h
is where the dual action of adjunctive Lib
can help. Librax is the only drug that co

References: 1. Silen, W.: "Peptic Ulcer," in Wintrobe, M.
et al. (eds.): *Harrison's Principles of Internal Medicine*
6, New York, McGraw-Hill Book Company, 1970, p. 1
2. Wolf, S., and Goodell, H. (eds.): *Harold G. Wo*
Stress and Disease, ed. 2, Springfield, Ill., Charle
Thomas, 1968, pp. 68-69. 3. *Ibid.*, p. 257. 4. Schottsta
W. W.: *Psychophysiologic Approach in Medical Prac*
Chicago, Ill., The Year Book Publishers, Inc., 1960, p.
5. Alvarez, W. C.: *The Neuroses*, Philadelphia, Pa., W
Saunders Company, 1951, p. 384.



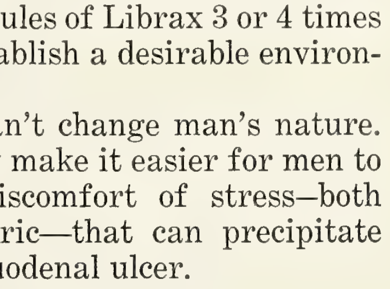
bines the tranquilizing action of Librium® (chlordiazepoxide HCl) with the potent anticholinergic action of Quarzan® (clidinium Br).

Protects man from his own hungry personality. The action of Librium reduces anxiety—helps protect the vulnerable patient from the psychological overreaction to stress that clutches his stomach. At the same time, the action of Quarzan helps quiet the hyperactive gut, decreasing hypermotility and hypersecretion.

An inner healing environment with 1 or 2 capsules, 3 or 4 times daily. Of course, there's more to the treatment of duodenal ulcer than a prescription for Librax. The patient—with your guidance—will have to adjust to a different pattern of living if treatment is to succeed. During this adjustment period, 1 or 2 capsules of Librax 3 or 4 times daily can help establish a desirable environment for healing.

Librax: It can't change man's nature. But it can usually make it easier for men to cope with the discomfort of stress—both psychic and gastric—that can precipitate and exacerbate duodenal ulcer.

Librax: Rx #60 1 cap. *a.c.* and 2 *h.s.*



Before prescribing, please consult complete product information, a summary of which follows:

Indications: Indicated as adjunctive therapy to control emotional and somatic factors in gastrointestinal disorders.

Contraindications: Patients with glaucoma; prostatic hypertrophy and benign bladder neck obstruction; known hypersensitivity to chlordiazepoxide hydrochloride and/or clidinium bromide.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. As with all CNS-acting drugs, caution patients against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Though physical and psychological dependence have rarely been reported on recommended doses, use caution in administering Librium (chlordiazepoxide hydrochloride) to known addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions), following discontinuation of the drug and similar to those seen with barbiturates, have been reported. Use of any drug in pregnancy, lactation, or in women of childbearing age requires that its potential benefits be weighed against its possible hazards. As with all anticholinergic drugs, an inhibiting effect on lactation may occur.

Precautions: In elderly and debilitated, limit dosage to smallest effective amount to preclude development of ataxia, oversedation or confusion (not more than two capsules per day initially; increase gradually as needed and tolerated). Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (e.g., excitement, stimulation and acute rage) have been reported in psychiatric patients. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.

Adverse Reactions: No side effects or manifestations not seen with either compound alone have been reported with Librax. When chlordiazepoxide hydrochloride is used alone, drowsiness, ataxia and confusion may occur, especially in the elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few instances syncope has been reported. Also encountered are isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent and generally controlled with dosage reduction; changes in EEG patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally with chlordiazepoxide hydrochloride, making periodic blood counts and liver function tests advisable during protracted therapy. Adverse effects reported with Librax are typical of anticholinergic agents, *i.e.*, dryness of mouth, blurring of vision, urinary hesitancy and constipation. Constipation has occurred most often when Librax therapy is combined with other spasmolytics and/or low residue diets.

in the treatment of duodenal ulcer

adjunctive

Librax®

Each capsule contains 5 mg chlordiazepoxide HCl and 2.5 mg clidinium Br.

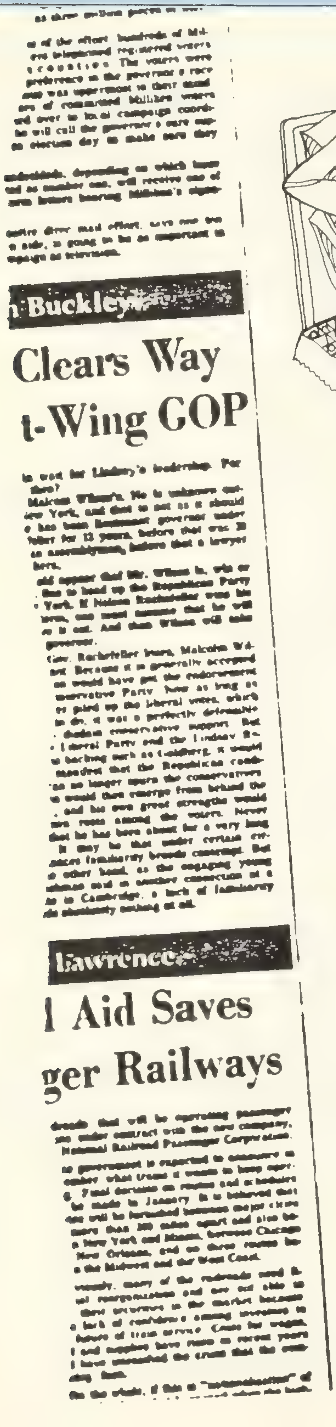
ROCHE

Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, N.J. 07110

Dear Doctor:

Perhaps you know someone like the fellow in our advertisement ... who figures as long as somebody else is paying, he might as well stay in the hospital as long as he can. We hope our message will make people aware of the fact that unnecessary days of hospital care help make health care protection cost more for everyone, and how all of us are working to prevent this kind of abuse.

MICHIGAN BLUE SHIELD



n Buckley

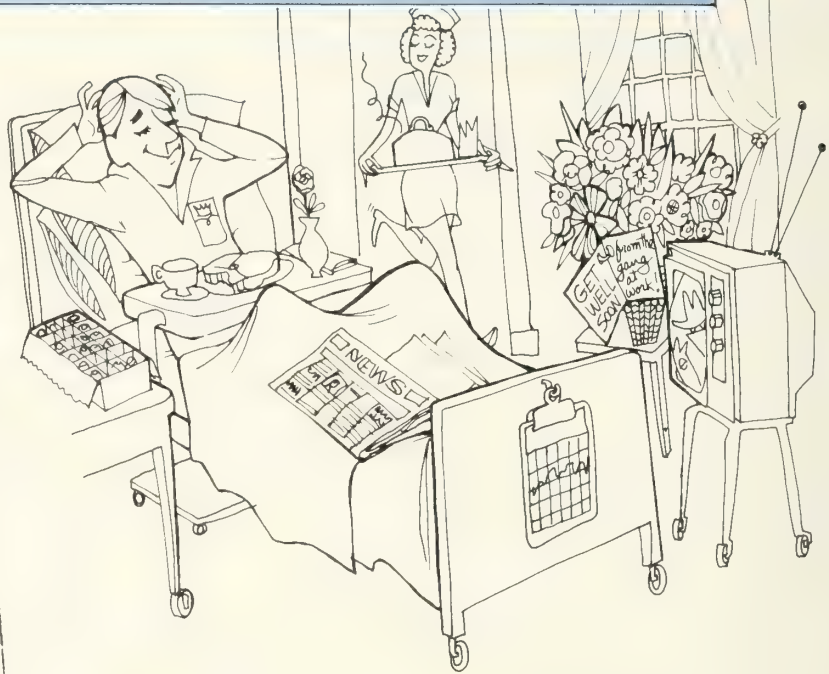
Clears Way

t-Wing GOP

Lawrence

l Aid Saves

ger Railways


NEWS
GET WELL SOON
from the gang at work!

When a patient doesn't want to go home...

We've all heard stories about the hospital patient who asks to stay "just one more day" when his doctor tells him he's ready to go home. Actually, this doesn't happen as often as some people think, but when it does there are at least two good reasons why such requests aren't granted.

First, early activity may be an important part of a patient's therapy and can help him to a speedy recovery. Second, doctors are acutely conscious of the increased costs of health care, both for the individual and the community at large. Everyone else should be, too. Eliminating unnecessary days of hospital care is one way that helps keep health-care costs down for us all.

At Blue Cross and Blue Shield we're working to slow down rising health-care costs in every way we can. One way is by maintaining a careful watch over all subscriber hospital admissions. Another is by a continuing system of audits and comparative analyses of medical and hospital costs from communities throughout the state.

The cost of health care, of course, determines what you pay for Blue Cross and Blue Shield protection. All of us — hospital, doctor, patient, Blue Cross and Blue Shield — can make a contribution to stabilizing and reducing the cost of health care. We pledge to do our part. Will you help?

Pick up your free copy of "Your Health, Your Doctor and Your Pocketbook" at any Michigan Blue Cross and Blue Shield office. Copies are also available from most participating doctors and hospitals.

Help us help you

MICHIGAN BLUE CROSS AND BLUE SHIELD

President's Page

H. H. Hiscock, M.D.
MSMS President

The Peer Review Picture

(This article is written at Doctor Hiscock's request by Beverly C. Payne, MD, Ann Arbor, who was editor of the Hospital Utilization Review Manual prepared in 1968 by a committee of Michigan physicians.)

Is useful, continual evaluation of medical care a reality of the near future? Do we have the ability, the technology, to make this feasible?

The first question is rapidly being resolved on a political basis, the second has been painfully evolved by physicians in organized hospital medical staffs and national medical organizations since 1917 when the American College of Surgeons first required a tissue committee for accreditation of a hospital.

The American Medical Association in 1970 first proposed that there be continual review of professional standards within the hospitals and on an ambulatory basis. The standards are to be established and reviewed by the medical profession through independent organizations not controlled by the hospitals or by medical societies. The proposal found immediate response in Washington. This response is predicated on the supposition that such a review would be more effective in controlling costs than the present hospital review processes required under Title XVIII (Medicare).

Some form of Professional Standards Review Organization is likely to become mandatory in 1972, with modification of the Bennett Amendment to the Social Security Act. The pressure to develop Foundations with County and State Medical Society sponsorship to implement the law will then be immense. It is a professional expectation that the legislation will address itself to the most important aspect of medical care review, that is, quality of care received by the patient.

A distressing amount of time and effort has gone into claims review, admission certification and recertification of length of stay. It is well to remind ourselves that Peer Review or Professional Standards Review has not three, but four faces

1) Admission Review
2) Length of Stay Review
3) Claims Review
4) Quality of Care Review

and the greatest of these is quality of care. The review of admission, length of stay and claims is meaningless, mischievous and misleading without attention being given to how the patient is cared for by his medical and nursing attendants.

A methodology for such a continual review of admission, length of stay and quality of care was originated in Michigan with the energies of Michigan State Medical Society physicians. The manual later was published by the Postgraduate Department of the University of Michigan School of Medicine, and well in excess of 6,000 copies of the publication *"Hospital Utilization Review Manual"* have been sold.

Since then a research project utilizing the principles and a great deal of content of the criteria in the *Hospital Utilization Review Manual* has been undertaken in Hawaii. The Hawaii Medical Association sponsored a statewide

(Continued on Page 212)

You know
diuretics
medically.

Short-acting diuretics may create abrupt,
inconvenient waves of diuresis.
Long-acting Hygroton offers a gentle flow
rather than abrupt diuresis.
It's smooth acting.
In edema and hypertension.

Hygroton® chlorthalidone USP

Makes water, not waves.

But
have you
met them
socially?
LADIES

Electrolyte imbalance may occur when using diuretics. Hygroton is contraindicated in severe renal or hepatic diseases and, of course, if it causes hypersensitivity. Carefully supervise those who may be receiving other antihypertensives.

Hygroton® chlorthalidone USP *Indications:* Hypertension and many types of edema involving retention of salt and water. *Contraindications:* Hypersensitivity and most cases of severe renal or hepatic diseases. *Warnings:* With the administration of enteric-coated potassium supplements, which should be used only when adequate dietary supplementation is not practical, the possibility of small-bowel lesions (obstruction, hemorrhage, and perforation) should be kept in mind. Surgery for these lesions has been required frequently and deaths have occurred. Discontinue enteric-coated potassium supplements immediately if abdominal pain, distention, nausea, vomiting, or gastrointestinal bleeding occur. Use with caution in pregnant women and nursing mothers since the drug crosses the placental barrier and appears in cord blood and since thiazides appear in breast milk. The drug may result in fetal or neonatal jaundice, thrombocytopenia, and possibly other adverse reactions which have occurred in the adult. When used in women of childbearing age, balance benefits of drug against possible hazards to fetus. *Precautions:* Antihypertensive therapy with this drug should always be initiated cautiously in postsympathectomy patients and in patients receiving ganglionic blocking agents, other potent antihypertensive drugs or curare. Reduce dosage of concomitant antihypertensive agents by at least one-half. Because of the possibility of progression of renal damage, periodic determination of the BUN is indicated. Discontinue if the BUN rises or liver dysfunction is aggravated. Hepatic coma may be precipitated. Electrolyte imbalance, sodium and/or potassium depletion may occur. If potassium depletion should occur during therapy, the drug should be discontinued and potassium supplements given, provided the patient does not have marked oliguria. Take special care in cirrhosis or severe ischemic heart disease and in patients receiving corticosteroids, ACTH, or digitalis. Salt restriction is not recommended. *Adverse Reactions:* Nausea, gastric irritation, vomiting, anorexia, constipation and cramping, dizziness, weakness, restlessness, hyperglycemia, glycosuria, hyperuricemia, headache, muscle cramps, orthostatic hypotension, which may be potentiated when chlorthalidone is combined with barbiturates, narcotics or alcohol, aplastic anemia, leukopenia, thrombocytopenia, agranulocytosis, impotence, dysuria, transient myopia, skin rashes, urticaria, purpura, necrotizing angiitis, acute gout, and pancreatitis when epigastric pain or unexplained G.I. symptoms develop after prolonged administration. Other reactions reported with this class of compounds include: jaundice, xanthopsia, paresthesia, and photosensitization. *Average Dosage:* 50 or 100 mg. with breakfast daily or 100 mg. every other day. *How Supplied:* White, single-scored tablets of 100 mg. and aqua tablets of 50 mg., in bottles of 100 and 1000. (B)46-230-G *For full details, please see the complete prescribing information.*

GEIGY Pharmaceuticals, Division of CIBA-GEIGY Corporation, Ardsley, New York 10502

HY- 7764-9

Michigan Medicine

In This Issue

SCIENTIFIC ARTICLES

193 The Michigan physician: His education through face to face contacts and technical media; John N. Kotre, PhD; Floyd C. Mann, PhD; Neal A. Vanselow, MD
199 Cutaneous side effects of oral contraceptives; Ralph J. Coskey, MD
201 Insulin requirements in childhood diabetes mellitus; Arthur F. Kohrman, MD; William B. Weil, MD
203 Non-medical use of nitrous oxide: A preliminary report; Edward J. Lynn, MD, Mary James, Robert Dendy, MA, Lance A. Harris, MA, Richard G. Walter, PhD
205 Congestive heart failure due to coarctation of the aorta in a newborn infant; Kirtikant M. Shah, MD, William W. Nicholls, MD

SPECIAL ARTICLES

209 MSMS staff reorganization; with Warren F. Tryloff
213 Only the AMA can provide national leadership of physicians; Donald N. Sweeny, Jr., MD
236 Michigan Health Council helps place 1,007 physicians in Michigan; John A. Doherty
254 Governmental health care assistance programs

PHOTO SECTION, PAGES 277-280

OTHER FEATURES

187 President's page
191 MSMS Leadership
198 Monthly Surveillance Report
207 Drug Therapy Problems
208 Perinatal Tips
215 Your opinion please
221 MSMS news
Michigan Mediscene
226 Medical care programs
230 Viewpoints
233 New Members
237 About doctors
241 County societies
251 Ancillary
261 In memoriam
281 Breaking news

MICHIGAN MEDICINE is the official organ of the Michigan State Medical Society, published under the direction of the Publication Committee. Published Semi-Monthly, Trimonthly in January and December; 26 issues, by the Michigan State Medical Society as its official journal. Second class postage paid at East Lansing, Mich. and at additional mailing offices. Yearly subscription rate, $9.00; single copies, 80 cents. Additional postage: Canada, $1.00 per year; Pan-American Union, $2.50 per year; Foreign, $2.50 per year. Printed in USA. All communications relative to manuscripts, advertising, news, exchanges, etc., should be addressed to Judith Marr, Michigan State Medical Society, 120 West Saginaw Street, East Lansing, Michigan 48823. Phone Area Code 517, 337-1351. © 1971 Michigan State Medical Society.

SCIENTIFIC EDITOR
John W. Moses, MD

EXECUTIVE EDITOR
Herbert A. Auer

MANAGING EDITOR
Judith Marr

PUBLICATION COMMITTEE
Robert M. Leitch, MD
Union City
Chairman

Donato F. Sarapo, MD
Adrian

Edward J. Tallant, MD
Detroit

INFORMATION FOR CONTRIBUTORS

1. Address scientific manuscripts to the Publication Committee, Michigan State Medical Society, 120 West Saginaw Street, East Lansing, Michigan 48823. Submit original, double-spaced typewritten copy and two carbon copies or photo copies on letter size (8½ x 11 inch) paper. On page one, include title, authors, degrees, academic titles, and any institutional or other credits.

2. Authors are responsible for all statements, methods, and conclusions. These may or may not be in harmony with the views of the Editorial Staff. It is hoped that authors may have as wide a latitude as space available and general policy will permit. The Publication Committee expressly reserves the right to alter or reject any manuscript, or any contribution, whether solicited or not.

3. Illustrations should be submitted in the form of glossy prints or original sketches from which reproductions will be made by **Michigan Medicine.**

4. Articles should ordinarily be less than four printed pages in length (3000 words).

5. References should conform to *Cumulative Index Medicus,* including, in order: Author, title, journal, volume number, page, and year. Book references should include editors, edition, publisher, and place of publication, as well.

6. The editors welcome, and will consider for publication, letters containing information of interest to Michigan physicians, or presenting constructive comment on current controversial issues. New items and notes are welcome.

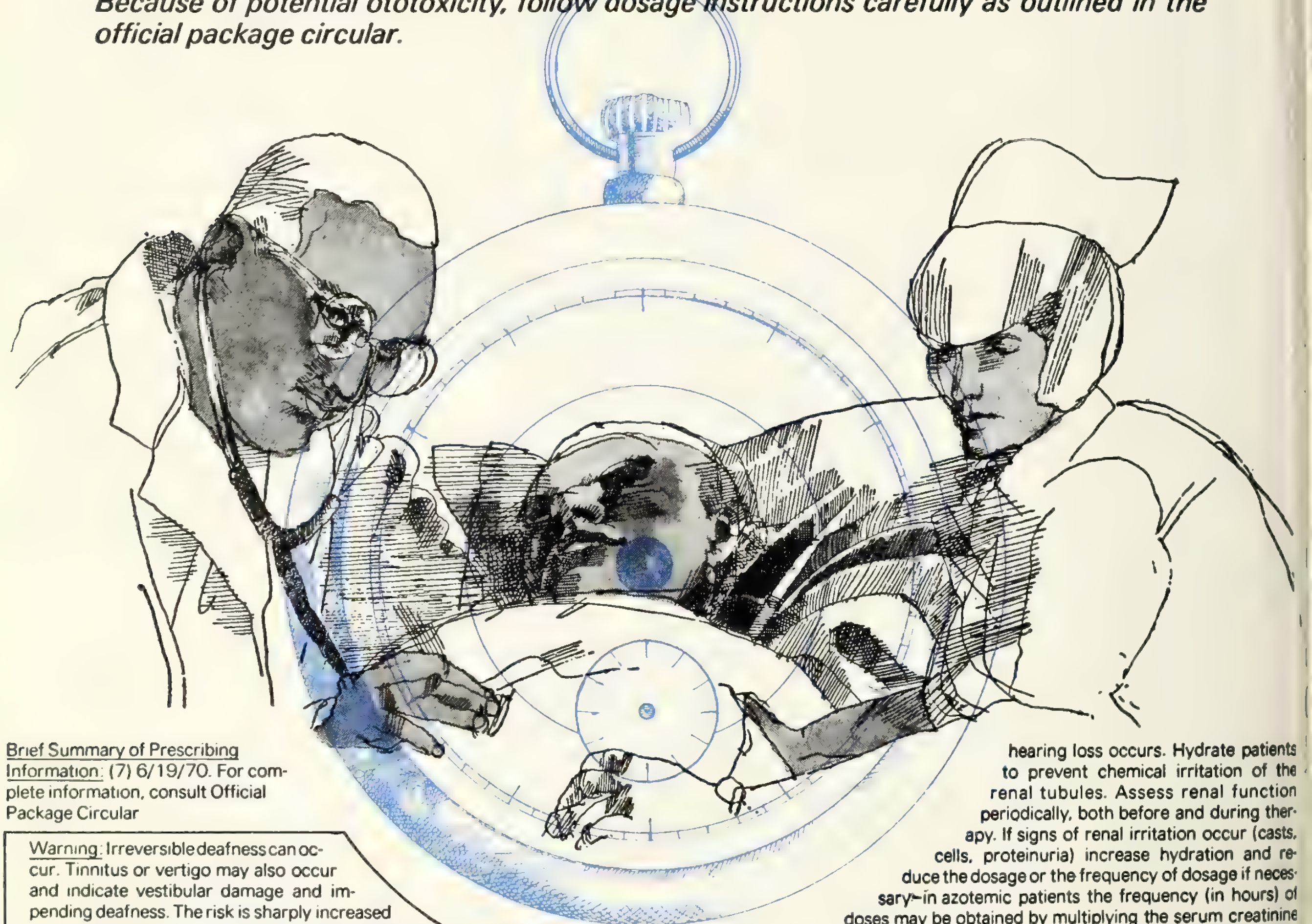
7. It is understood that material is submitted for exclusive publication in **Michigan Medicine.**

A valuable hospital antibiotic —when there is no time

in severe systemic infections—postoperative bacteremia, Gram-negative/staph pneumonias or neonatal sepsis—Kantrex® (kanamycin sulfate) is often indicated before results of customary sensitivity tests can be reported. Clinical response is often seen within 24-48 hours in susceptible infections, with remission soon after.

10 years of experience confirm the continuing effectiveness of Kantrex® against many Gram-negative bacilli (most Pseudomonas are resistant) and staph.

Because of potential ototoxicity, follow dosage instructions carefully as outlined in the official package circular.



Brief Summary of Prescribing Information: (7) 6/19/70. For complete information, consult Official Package Circular

> Warning: Irreversible deafness can occur. Tinnitus or vertigo may also occur and indicate vestibular damage and impending deafness. The risk is sharply increased with renal dysfunction. In such cases, decrease size and frequency of doses. Discontinue kanamycin and check hearing if azotemia increases. Watch carefully for ototoxicity in older patients and patients receiving more than 15 Gm. of kanamycin. To avoid neuromuscular paralysis with respiratory depression, postpone intraperitoneal instillation in post-operative patients until recovery from anesthesia and muscle relaxants is complete. Avoid concurrent use of other ototoxic drugs including ethacrynic acid. Safety in pregnancy is not established.

Indications: Serious infections due to susceptible strains of *E. coli,* Proteus sp., *A. aerogenes, K. pneumoniae, Serratia marcescens* and *Mima-Herellea.* Culture and sensitivity studies should be performed.

Contraindications: A history of hypersensitivity to the drug. Prior auditory damage by kanamycin or other agents may be a contraindication if effective alternative therapy is available.

Precautions: Obtain audiograms before and during therapy in patients with renal dysfunction when treatment lasts more than 5 days. Stop Kantrex if tinnitus or hearing loss occurs. Hydrate patients to prevent chemical irritation of the renal tubules. Assess renal function periodically, both before and during therapy. If signs of renal irritation occur (casts, cells, proteinuria) increase hydration and reduce the dosage or the frequency of dosage if necessary—in azotemic patients the frequency (in hours) of doses may be obtained by multiplying the serum creatinine by 9. If azotemia or oliguria occur, discontinue therapy. Mycotic or bacterial superinfection may occur.

Adverse Reactions: Irritation or pain at the injection site, skin rash, drug fever, headache and paresthesias.

Dosage and Administration: The maximum total daily dose should not exceed 1.5 Gm. by all routes of administration. The usual dose is 7.5 mg./Kg./12 hours I.M. The average adult dose is 1 Gm. daily. Uncomplicated infections due to sensitive organisms should respond in 24 to 48 hours. If no response occurs in 3 to 5 days, stop therapy and recheck the bacterial sensitivities. Hydrate patients well to minimize renal irritation. Inject deeply into the upper outer quadrant of the gluteal muscle. Discard partially used vials after 48 hours. The drug should not be physically mixed with other antimicrobials.

Supplied: Rubber capped vials as a ready-to-use sterile aqueous solution in two concentrations: 0.5 Gm. in 2 ml. and 1.0 Gm. in 3 ml. Also available—Pediatric Injection 75 mg. in 2 ml.

A.H.F.S. Category 8:12.28

BRISTOL BRISTOL LABORATORIES
Division of Bristol-Myers Company, Syracuse, New York 13201

KANTREX® INJECTION
(kanamycin sulfate)

MSMS Leadership

PRESIDENT	Harold H. Hiscock, MD	Flint
PRESIDENT-ELECT	Sidney Adler, MD	Detroit
SECRETARY	Kenneth H. Johnson, MD	Lansing
ASST. SECRETARY	Brooker L. Masters, MD	Fremont
TREASURER	John R. Ylvisaker, MD	Pontiac
ASST. TREASURER	C. Allen Payne, MD	Grand Rapids
SPEAKER	Vernon V. Bass, MD	Saginaw
VICE-SPEAKER	James D. Fryfogle, MD	Detroit
PAST PRESIDENT	Robert J. Mason, MD	Birmingham
COUNCIL CHAIRMAN	Ross V. Taylor, MD	Jackson
VICE-CHAIRMAN	Brooker L. Masters, MD	Fremont

DIRECTOR
Warren F. Tryloff . . . . East Lansing
GENERAL COUNSEL
Lester P. Dodd . . . . Detroit
LEGAL COUNSEL
A. Stewart Kerr . . . . Detroit

ECON. CONSULTANT
Clyde T. Hardwick . . . . Houghton
HISTORIAN
Wm. J. Stapleton, Jr., MD . . . . Detroit
ASS'T HISTORIAN
Wm. M. LeFevre, MD . . . . Muskegon

SCIENTIFIC EDITOR
John W. Moses, MD . . . . Detroit

First District Councilors: (Wayne County)
Edward J. Tallant, MD, Detroit
Ralph R. Cooper, MD, Detroit
Frank G. Bicknell, MD, Detroit
Milton R. Weed, MD, Grosse Pointe Park
Brock E. Brush, MD, Detroit
Second District Councilor: Ross V. Taylor, MD, Jackson
Counties: Clinton, Eaton, Hillsdale, Ingham, Jackson
Third District Councilor: Robert M. Leitch, MD, Union City
Counties: Branch, Calhoun, St. Joseph
Fourth District Councilor: W. Kaye Locklin, MD, Kalamazoo
Counties: Allegan, Berrien, Cass, Kalamazoo, Van Buren
Fifth District Councilor: Noyes L. Avery, MD, Grand Rapids
Counties: Barry, Ionia-Montcalm, Kent, Ottawa
Sixth District Councilor: Ernest P. Griffin, Jr., MD, Flint
Counties: Genesee, Shiawassee
Seventh District Councilor: John J. Coury, MD, Port Huron
Counties: Huron, Sanilac, Lapeer, St. Clair
Eighth District Councilor: A. Carl Stander, MD, Saginaw
Counties: Gratiot-Isabella-Clare, Midland, Saginaw, Tuscola
Ninth District Councilor: Adam C. McClay, MD, Traverse City
Counties: Grand Traverse-Leelanau-Benzie, Manistee, Northern Michigan (Antrim, Charlevoix, Cheboygan and Emmet combined), Wexford-Missaukee
Tenth District Councilor: Robert C. Prophater, MD, Bay City
Counties: Alpena-Alcona-Presque Isle, Bay-Arenac-Iosco, North Central Counties, (Otsego, Montmorency, Crawford, Oscoda, Roscommon, Ogemaw, Gladwin and Kalkaska, combined)
Eleventh District Councilor: Brooker L. Masters, MD, Fremont
Counties: Mason, Mecosta-Osceola-Lake, Muskegon, Newaygo, Oceana
Twelfth District Councilor: William A. LeMire, Sr., MD, Escanaba
Counties: Chippewa-Mackinac, Delta-Schoolcraft, Luce, Marquette-Alger
Thirteenth District Councilor: Donald T. Anderson, MD, Wakefield
Counties: Dickinson-Iron, Gogebic, Houghton-Baraga-Keweenaw, Menominee, Ontonagon
Fourteenth District Councilor: Donato F. Sarapo, MD, Ann Arbor
Counties: Lenawee, Livingston, Monroe, Washtenaw
Fifteenth District Councilor: Sydney Scher, MD, Mount Clemens
Counties: Macomb, Oakland

COUNCILOR
DISTRICT MAP
13
12
9
10
11
8
7
5
6
15
4
2
14
3
1

ILOSONE
LIQUID
250
Lilly

**Not too little, not too much...
but just right!**

"Just right" amounts of Ilosone Liquid 250
can be dispensed easily from the pint bottle in *any* quantity
you specify to meet your patients' precise needs—
without regard to package size.

ready mixed
Ilosone® Liquid 250
Erythromycin Estolate
(equivalent to 250 mg. of base per 5-ml. teaspoonful)

*Additional information available
to the profession on request
Eli Lilly and Company
Indianapolis, Indiana 46206*

Lilly

100204

The Michigan physician:

His education through face to face contacts and technical media

By John N. Kotre, Ph.D.
Floyd C. Mann, Ph.D.
Neal A. Vanselow, M.D.
Ann Arbor

(Fifth in a series)

The previous two articles in this series reported on the Michigan physician's use and evaluation of three major media of continuing education: the medical journal, the professional meeting, and the postgraduate course (3, 4). It was found that physicians were quite positive about periodical literature and professional meetings, but not as enthusiastic about postgraduate courses. General practitioners, however, who were less positive than others about the journal and the professional meeting, were more positive than others about the postgraduate course.

The present article discusses physicians' use and evaluation of avenues of education which involve (1) face-to-face contact with others in the immediate work environment, and (2) other information-transfer media with which few physicians appear to have had experience. Specifically, the article concerns itself with eight face-to-face activities, five of which have to do with contacting other physicians (group discussions — study group or journal club, hospital meetings, informal discussions, obtaining formal consultation, and giving formal consultation) and three of which involve contacts with people other than physicians (nurses, other health professionals, and detailmen). The article also presents data on five technical media of education: audio tapes, video tapes, correspondence courses, MEDLARS, and the Michigan Drug Information Service.

Use

The extent to which the activities under consideration were engaged in by Michigan physicians was measured by the same question which determined the amount of time physicians spent reading periodical literature. A total of fifteen activities — including the thirteen in which we are currently interested — were presented to respondents, and they were requested to indicate the number of hours per week they devoted to each. *Table 1* displays the data for the four major groups of physicians and compares results for the items presently under discussion with those for reading periodical literature.

The general sample of medical doctors reported that they gave more time to activities involving face-to-face contact with other physicians than to those involving contacts with persons other than physicians. Forty-three percent said they gave two to three or more hours per week to informal discussions and contacts with other physicians; 39 percent said they gave as much time to hospital meetings; 33 percent devoted as much to giving formal consultation to other physicians; 15 percent to obtaining formal consultation from other physicians; and 15 percent to group discussions (study group or journal club). Only 18 percent of the medical doctors, on the other hand, spent at least two to three hours per week with nurses, only nine percent with health professionals other than doctors or nurses, and only seven percent with detailmen. (The majority of doctors gave no more than one-half hour per week to nurses, "other" health professionals, and detailmen.) All these figures compare with the 73 percent who gave two to three or more hours per week to periodical literature.

Significantly more doctors of osteopathy than medical doctors reported they gave as much as two to three hours per week to informal discussions and contacts with other physicians. More osteopaths spent this amount of time obtaining formal consultation and fewer giving formal consultation. More devoted a minimum of two or three hours to contacts with detailmen and fewer to contacts with nurses.

The criterion physicians, in general, reported more face-to-face interaction than medical doctors

Scientific papers

This research was supported by the Michigan Association for Regional Medical Programs Contract 69-5-23.

Table 1

Use of Face-to-Face Contacts and Technical Media

19. Listed below are different methods a doctor might use to continue his medical learning. How many hours PER WEEK do you devote to each?

		PERCENT responding 2-3 OR MORE HOURS per week:			
		Medical Doctors	Doctors of Osteopathy	Doctors' Doctors	Informal/ Formal Consultants
	h) Reading periodical literature	73	74	77	81
FACE-TO-FACE CONTACTS WITH:	c) Informal discussions and contacts with other physicians	43	53*	63**	66**
(A) OTHER PHYSICIANS	b) Hospital meetings	39	29	43	45
	e) Giving formal consultation to other physicians	33	22**	55**	56**
	f) Contacts with nurses	18	11**	15	17
(B) OTHER PERSONS	d) Obtaining formal consultation from other physicians	15	23**	9**	15
	a) Group discussions (study group or journal club)	15	12	21**	24**
	g) Contacts with other health professionals	9	9	6*	4*
	l) Contacts with detailmen	7	14**	7	5
TECHNICAL MEDIA	i) Audio tape recordings and records	5	15**	15**	10**
	k) Correspondence courses	1	3**	1	1
	j) Video tape	1	5*	0	0
	n) Michigan Drug Information Service	0	2	0	0
	m) MEDLARS	0	1**	0	0
	Average, No Response or Activity "Not Available"***	12	10	4	3
	N =	919	183	96	89

---

*The mean of this distribution (not shown here) is significantly different from the mean of the medical doctors' distribution at the .05 level (t-test, two-tailed). On occasion, this significant mean difference is not reflected in the figures above, which present only the percentage of respondents in the upper four categories of the distribution.

**The mean is significantly different at the .01 level (t-test, two-tailed).

***The no response rate plus the "activity-not-available" rate averaged for the fourteen items.

at large. Significantly more doctors' doctors and informal/formal consultants than medical doctors spent two to three or more hours per week in informal discussions and contacts with other physicians. Significantly more devoted this amount of time to giving formal consultation, and significantly more gave as much to group discussions. As would be expected, fewer doctors' doctors spent a minimum of two to three hours obtaining formal consultation. Fewer of either group put in as much time with health professionals other than doctors or nurses.

Within the general sample of medical doctors, it was general practitioners who spent the least amount of time in contact with other physicians. Only 28 percent spent two to three hours per week in hospital meetings, only four percent in giving formal consultation, and only seven percent in group discussion. General practitioners devoted more time than others, however, to contacts with detailmen (16 percent).

Psychiatrists spent considerably more time than others with health professionals other than doctors or nurses (30 percent) and less time with detailmen (0 percent). Doctors in institutional practice, those affiliated with larger hospitals, and those in the lower age brackets tended to spend more time than others in contacts with other physicians, but not in contacts with non-physician personnel.

Audio tape, correspondence courses, video tape, Michigan Drug Information Service,* and MEDLARS* were reportedly given less time by the general sample of medical doctors than any of the other activities listed in *Table 1.* All five except audio tape were likewise given less time by the other three groups of respondents, osteopaths, doctors' doctors and informal/formal consultants.

More doctors of osteopathy than medical doctors, however, made use of each of these five activities, the difference being statistically significant in four instances. The largest difference involved the use of audio tapes: fifteen percent of the osteopaths spent as much as two to three hours per week with tape recordings. Doctors' doctors and consultants also reported substantially greater use of audio tapes than the general sample, 15 and 10 percent

---

*The Michigan Drug Information Service operates out of the pharmacy at the University of Michigan Hospital and provides information regarding drugs by phone. MEDLARS (Medical Literature Analysis and Retrieval Service) is a computerized system for retrieving references to medical literature.

Table 2

Evaluations of Face-to-Face Contacts

16. To what extent do you find educational value in the following activities?

		Of those who use the activity, PERCENT responding TO A GREAT or VERY GREAT EXTENT			
		Medical Doctors	Doctors of Osteopathy	Doctors' Doctors	Informal/ Formal Consultants
FACE-TO-FACE CONTACT WITH: OTHER PHYSICIANS	h) Reading periodical literature	52	53	61**	63**
	(N who report use)	(883)	(174)	(95)	(87)
	a) Group discussions (study group or journal club)	49	52**	52	61**
	(N who report use)	(634)	(127)	(79)	(75)
	c) Informal discussions and contacts with other physicians	43	48	43	48
	(N who report use)	(881)	(176)	(96)	(88)
	d) Obtaining formal consultation from other physicians)	40	52**	22**	27**
	(N who report use)	(866)	(174)	(96)	(88)
	e) Giving formal consultation to other physicians	33	28**	35**	35*
	(N who report use)	(803)	(144)	(95)	(88)
	b) Hospital meetings	32	31	28	33
	(N who report use)	(872)	(165)	(96)	(88)
OTHER PERSONS	n) Contacts with detailmen	7	11**	3**	1**
	(N who report use)	(786)	(169)	(88)	(80)
	g) Contacts with other health professionals	6	7**	0**	1**
	(N who report use)	(799)	(166)	(90)	(82)
	f) Contacts with nurses	4	2	1	0
	(N who report use)	(815)	(161)	(93)	(85)

---

*The mean of this distribution is significantly different from the mean of the medical doctors' distribution at the .05 level (t-test, two-tailed). On occasion, this significant mean difference is not reflected in the figures above, which present only the percentage of respondents in the upper two categories of the distribution.

**The mean is significantly different at the .01 level (t-test, two-tailed).

respectively devoting at least two to three hours per week to them.

Physicians' lack of use of audio tapes, video tapes, and correspondence courses cannot be attributed to unfamiliarity with these media. Only three to six percent of each of the four major groups said they were not familiar with audio tapes, only eight to 14 percent said the same regarding video tapes, and 15 to 22 percent regarding correspondence courses. MEDLARS and the Michigan Drug Information Service, on the other hand, were unknown to the majority of respondents.* Between 61 and 75 percent of each group indicated they were not familiar with MEDLARS and between 46 and 55 percent said the same with regard to the Michigan Drug Information Service.

Within the general sample of medical doctors, more frequent use of both audio and video tapes was reported by those in the upper peninsula. Forty-one percent said they devoted at least ½ hour per week to audio tapes, and 18 percent spent as much time on video tapes. These were higher proportions than those in any of the other regions.

Evaluation

Evaluations of face-to-face contacts and the five technical media as sources of medical learning were made in the same context as evaluations of educational activities reported upon previously (3, 4). A list of twenty-two activities were presented to physicians, and they were invited to rate the extent to which they found educational value in each. *Table 2* presents their evaluations of the eight kinds of face-to-face contact and *Table 3* presents evaluations of the five technical media. In each case, a comparison is made with the rating given to reading periodical literature, the medium judged most effective by responding physicians.

The activities judged most valuable by medical doctors at large were the ones involving contact with other physicians in the immediate work environment. Of medical doctors who engaged in each of the following activities, 49 percent found great or very great educational value in group discussions (study group or journal club); 43 percent derived as much from informal discussions and contacts with other physicians, 40 percent from obtaining formal consultation, 33 percent from giving formal consultation, and 32 percent from hospital meetings. These activities ranked high among

---

*These services were just beginning at the time the survey was made (March-April, 1969).

Table 3

Evaluations of Technical Media

16. To what extent do you find educational value in the following activities?

	Of those who use the activity, PERCENT responding TO A GREAT or VERY GREAT EXTENT:			
	Medical Doctors	Doctors of Osteopathy	Doctors' Doctors	Informal/Formal Consultants
(h) Reading periodical literature	52	53	61**	63**
(N who report use)	(883)	(174)	(95)	(87)
(k) Audio tape recordings and records	30	39**	48**	54**
(N who report use)	(419)	(123)	(69)	(67)
(l) Video tape	20	27**	6**	11*
(N who report use)	(250)	(83)	(33)	(36)
(m) Correspondence courses	15	11	9	8
(N who report use)	(240)	(61)	(23)	(26)
(o) MEDLARS	6	9**	0	0
(N who report use)	(113)	(34)	(10)	(13)
(p) Michigan Drug Information Service	4	11**	0**	5
(N who report use)	(208)	(55)	(19)	(20)

---

*The mean of this distribution is significantly different from the mean of the medical doctors' distribution at the .05 level (t-test, two-tailed). On occasion, this significant mean difference is not reflected in the figures above, which present only the percentage of respondents in the upper two categories of the distribution.

**The mean is significantly different at the .01 level (t-test, two-tailed).

those which provided the greatest educational value to medical doctors: out of twenty-two activities, group discussions were ranked third, informal discussions fourth, obtaining formal consultation seventh, giving formal consultation eighth, and hospital meetings ninth.

Contacts with persons other than physicians provided little or no medical learning for doctors. Only seven percent found great or very great value in contacts with detailmen, six percent in contacts with health professionals other than doctors or nurses, and four percent in contacts with nurses (whereas 52 percent found comparable value in periodical literature). Contacts with detailmen were ranked sixteenth in the list of twenty-two activities; contacts with other health professionals were placed eighteenth; and contacts with nurses were placed nineteenth.

Significantly more osteopathic physicians than medical doctors considered the value of group discussions (study group or journal club) to be great or very great. Likewise, significantly more derived great or very great value from obtaining formal consultation. Fewer osteopaths than medical doctors, however, found as much value in giving formal consultation to other physicians.

Regarding contacts with persons other than physicians, osteopaths reported finding more value than medical doctors in contacts with detailmen and in contacts with other health professionals. Osteopaths' ranking of all eight activities in the list of twenty-two educational alternatives was close to the ranking made by medical doctors. Osteopaths, however, attached more importance to obtaining formal consultation (ranked second) and less importance to giving formal consultation (ranked twelfth).

Criterion physicians, in general, differed from the general sample of medical doctors in a direction opposite to that of osteopaths. Significantly more doctors' doctors and consultants than medical doctors derived great or very great value from giving formal consultation, and significantly fewer from obtaining formal consultation. More informal/formal consultants found great or very great value in group discussion.

Concerning contacts with persons other than physicians, doctors' doctors and informal/formal consultants reported finding less value than medical doctors in contacts with detailmen and in contacts with other health professionals. Criterion doctors' ranking of all eight activities in the list of twenty-two educational alternatives was close to that made by the general sample of medical doctors. As would be expected, both criterion groups attached less importance to obtaining formal consultation, doctors' doctors placing it twelfth and consultants eleventh.

Within the general sample of medical doctors, fewer general practitioners reported value in giving formal consultation (15 percent: great or very great value) and more indicated value in obtaining consultation (54 percent). They also evaluated contacts with detailmen more positively (14 percent.) Psychiatrists were less positive than others about hospital meetings (16 percent) but more positive about giving formal consultation (49 percent) and contacts with health professionals other than doctors or nurses (22 percent).

Among the five miscellaneous techniques of continuing education, it was audio tapes which received the highest evaluation *(Table 3).* Of the medical doctors who made use of tapes (N=419), 30 percent found educational value in them to a great or very great extent (52 percent of those who read periodical literature — N=883 — found comparable value in it). Significantly greater proportions of osteopaths, doctors' doctors, and consultants considered tapes to be of value. Among the twenty-two educational activities which were evaluated by respondents, the value of audio tapes was ranked eleventh by medical doctors, seventh by osteopaths, fourth by doctors' doctors, and fourth by consultants. For the latter two groups, only periodical literature, professional meetings, and group discussions were thought to have more educational value.

Video tapes, which doctors appeared to have had less experience with, were not as well thought of by any of the four samples. Twenty percent of the medical doctors who used video tapes (N=250) found educational value in them to a great or very great extent. Significantly more osteopaths but significantly fewer doctors' doctors and consultants found comparable value in them. The educational value of video tapes was considered below average in comparison with the twenty-two other activities: medical doctors and osteopaths ranked them thirteenth in terms of value, consultants placed them fourteenth, and doctors' doctors fifteenth.

Regarding correspondence courses, fifteen percent of the medical doctors who used them (N=240) found great or very great value in them. The perceived value of MEDLARS was less, only six percent of the medical doctors who used it (N=113) finding great or very great value in it. Michigan Drug Information Service was valued to a similar extent by only four percent of the medical doctors who said they made use of it (N=208). More osteopaths than medical doctors thought positively about MEDLARS and the Drug Information Service but fewer doctors' doctors were as positive about the Drug Information Service. The value of each of these activities was ranked by the four samples in lower third of the list of twenty-two educational activities.

The most important of the background differences within the general sample of medical doctors concerned evaluations of the Michigan Drug Information Service. Of those few doctors who made use of this service, 40 percent in the north central region of the state, and 17 percent in the upper peninsula, considered its value to be great or very great. No more than 6 percent in any of the four southern regions thought as highly of its value.

Use vs. Evaluation

In general, those activities which were given more time by physicians were the ones evaluated more positively. There were, however, important exceptions to this general statement.

The general sample of medical doctors, first of all, gave more time to four kinds of face-to-face interaction than they did to group discussions (in the form of study groups or journal clubs — see *Table 1).* Yet those who engaged in this kind of discussion considered its value to be greater than that of any of the other face-to-face activities and nearly as great as that of reading periodical literature (see *Table 2*). The case was the same for osteopaths and nearly the same for doctors' doctors and consultants.

Contacts with nurses and hospital meetings, on the other hand, appeared to occupy more of the medical doctors' time than was educationally profitable. Among the eight kinds of face-to-face interactions, contacts with nurses were ranked fourth in terms of use *(Table 1)* but last in terms of educational value *(Table 2),* while hospital meetings were placed second in use but only fifth in value. The use-evaluation discrepancy in these two instances was not as great for osteopaths or criterion physicians.

Among the five miscellaneous techniques of continuing education, patterns of evaluation were very close to those of use. All four samples, for example, reported spending the greatest amount of time with audio tape recordings and records *(Table 1),* and all four samples' evaluation of this medium was the highest of the five activities *(Table 3).* It is still clear, however, that audio tapes were little used in comparison to the educaional value derived from them. They were well thought of by all physicians — particularly so by the criterion doctors — yet no more than 15 percent of any group (and only five percent of the general sample) spent as much as two to three hours per week with them.

Summary and Implications

Medical doctors in Michigan reported that they devoted less time to any one of five kinds of contact with other physicians (e.g., informal discussions) than they did to reading periodical literature. More time was given to these contacts, however, than was spent in interaction with nonphysician personnel (e.g. nurses). The least amount of time was spent on five technical media of education (e.g., audio tapes). Predictably, contacts with other physicians were thought to be the most valuable of these sources of education. One kind of contact — group discussion in the form of a study group or journal club — was considered to be nearly as valuable as reading periodical literature.

Three groups of medical doctors were especially distinctive in their replies:

(1) General practitioners spent less time than others at three activities involving contact with other physicians and more time in contact with detailmen. They found less value than others in giving formal consultation but more value in obtaining such consultation and in contacts with detailmen.

(2) Psychiatrists spent more time with health professionals other than doctors or nurses and found more educational value in these contacts. They spent less time with detailmen and found less value in hospital meetings but more value in giving formal consultation.

(3) Doctors from the upper peninsula made greater use of both audio and video tapes and, along with those from north central Michigan, were more positive than others about the Michigan Drug Information Service.

Two major implications can be drawn from these data. First, the use of study groups or journal clubs — activities which combine valued content (the medical journal) with stimulating process (face-to-face interaction) — should be encouraged. Second, the use of audio tape recordings and records should be equally encouraged. Both methods of education were little used in comparison with the high evaluations they received from those physicians who did make use of them.

References

1. Mann, F., Kotre, J., Reilly, A., and Vanselow, N. The Michigan Psysician and His Continuing Education, *Michigan Medicine.* 69: 981, 1970.
2. Mann, F., Kotre, J., Reilly, A., and Vanselow, N. The Michigan Physician: His Work Needs and Opportunities, *Michigan Medicine.* 69: 1063, 1970.
3. Kotre, J., Mann, F., Morris, W., and Vanselow, N. The Michigan Physician's Use and Evaluation of the Medical Journal, *Michigan Medicine.*
4. Kotre, J., Mann, F., and Vanselow, N. The Michigan Physician: His Use and Evaluation of the Professional Meeting and the Postgraduate Course, *Michigan Medicine.*

MICHIGAN
DEPARTMENT
OF PUBLIC
HEALTH

Monthly Surveillance Report

Cases of Certain Diseases Reported
To the Michigan Department of Public Health

For the Four-Week Period Ending January 29, 1971

	1971 This 4-Week Period	1970 Same 4-Week Period	1971 Total To Above Date	1970 Total Same Date	Total Cases for 1970
Rubella	156	317	156	317	3,012
Congenital Rubella Syndrome	0	0	0	0	2
Measles	53	40	53	40	1,834
Whooping Cough	4	7	4	7	195
Diphtheria	—	—	—	—	—
Mumps	1,090	502	1,090	502	7,825
Scarlet Fever & Strep Sore Throat	1,249	1,210	1,249	1,210	11,863
Tetanus	0	0	0	0	8
Poliomyelitis (paralytic)	0	0	0	0	1
Hepatitis	392	423	392	423	4,594
Salmonellosis (other than S. typhi)	55	51	55	51	665
Typhoid Fever (S. typhi)	0	1	0	1	14
Shigellosis	28	17	28	17	225
Aseptic Meningitis	10	5	10	5	296
Encephalitis	10	8	10	8	155
Meningococcic Meningitis	4	10	4	10	69
H. Influenza Meningitis	9	8	9	8	61
Tuberculosis	159	181	159	181	2,006
Syphilis	348	250	348	250	3,900
Gonorrhea	1,632	1,554	1,632	1,554	20,676

Information can be supplied by the local health department on the local incidence of disease.

Maurice Reizen, M.D., Director
Michigan Department of Public Health

Cutaneous side effects OF ORAL CONTRACEPTIVES

By Ralph J. Coskey, MD
Detroit

The oral contraceptives are combinations of synthetic progestogens and estrogens in ratios of 10:1 or greater.[1] At present there are between 7,000,000 and 8,000,000 women taking these pills.[2] The purpose of this paper is to describe the course of two women who had unusual skin manifestations while taking oral contraceptives. A brief review of the dermatologic side effects of the pill will also be made.

Report of Cases

Case I: — A 22 year old woman was seen in July, 1964 because of a pruritic eruption of six months' duration on her legs. This eruption was characterized by multiple erythematous, excoriated, two to three mm. papules. The patient had been on mestranol 0.05 mg. with norethindrone 1 mg. (Ortho-Novum 1 mg.) for 12 months before being seen. She also had taken thioridizine (Mellaril) for eight months before being seen.

A biopsy was obtained from one of the lesions. It showed a coat-sleeve perivascular infiltrate made up primarily of lymphocytes with a few PMNS and occasional eosinophils. Some of the capillaries showed edema and swelling of their endothelial cells. There also was extravasation of red blood cells around the blood vessels. This change was considered to represent lymphocytic vasculitis or toxic dermatitis.

The eruption did not respond to topical corticosteroids and antihistamines. The patient was urged on several occasions to discontinue her oral contraceptive. In February of 1965, after having the eruption 13 months, she discontinued the "pill" and the problem resolved. Follow up in 1970 revealed no evidence of recurrence.

Case II — This 51 year old woman was seen December 31, 1969 because of a lichenified, pigmented, ecchymotic and purpuric eruption on the dorsum of her forearms. The eruption began after the patient started on a sequential pill containing mestranol 0.080 mcg. with chlormadinone acetate 2 mg. (C-Quens). She continued on this tablet for two years and then changed to an oral contraceptive with ethinyl estradiol 0.05 mg. and norgestrel 0.50 mg. (Ovral). She was on this tablet when first seen.

The impression was that this eruption was due to the oral contraceptive. A CBC was normal and the platelets appeared adequate. A biopsy was obtained from the arm. It showed actinic elastosis in the corium. Some of the superficial capillaries were telangiectatic and engorged with red blood cells. There also were small areas of extravasation of red blood cells in the upper corium. Deeper in the corium there was a perivascular coat-sleeve like infiltrate made up mostly of lymphocytes with quite a few eosinophils. These changes were considered to be suggestive of toxic dermatitis or lymphocytic vasculitis.

The patient discontinued the "pill" and improved. However in March she had an erythema multiforme-like reaction on her forearms characterized by erythematous oval plaques, after taking tablets containing tridihexethyl chloride 25 mg. and meprobamate 200 mg. (Pathibamate 200) for three weeks. This medication was discontinued and the eruption resolved. At about the same time the patient started taking oral contraceptives containing ethinyl estradiol 0.050 mg. with norethindrone acetate 2.50 mg. (Norlestrin 2.5 mg.) However these tablets did not cause a recurrence of her problem.

A basophil degranulation test was performed on March 14, 1968 to meperidine HCL, mestranol, chlormadinone acetate, natural estrogenic substance, progestrone, tridihexethyl chloride, memprobamate and control. It was positive to mestranol and chlormadinone acetate which are in C-Quens and also to tridihexethyl chloride which is in Pathibamate.

Doctor Coskey is adjunct assistant professor in the Department of Dermatology, Wayne State University School of Medicine. He is affiliated with Detroit General Hospital.

Comment of Case II

This woman had an apparent sensitivity reaction to Ovral and C-Quens. It would appear that the progestin-like compounds in the oral contraceptive pills were responsible for the sensitivity reaction, since she tolerated Norlestrin which contains ethinyl estradiol but did not tolerate Ovral which also contains ethinyl estradiol. After the oral contraceptives were discontinued for two months, she developed an erythema multiforme-like reaction, from Pathibamate which is not related chemically to the oral contraceptives.

Discussion

Chloasma is probably the most commonly reported side effect of "the pill."[2,3] Its incidence in the United States probably lies between five to eight percent.[2] Both the sequential and combination-type oral contraceptives may cause chloasma. When the medication is stopped the chloasma may or may not disappear.

Acne often improves after administration of the pill. This is due to decrease in sebum production. However it usually takes three or four cycles for maximum effect and during the first two months of therapy approximately 25 percent of women will experience a flare of pre-existing acne.[4] After 12 months of therapy, a small percentage of women may develop increased sebaceous gland activity and a flare of acne.[4] When the pill is discontinued many women who had acne before starting therapy will experience a recurrence of their problem.

Other reported cutaneous side effects of the pill include alopecia,[5] hirsutism,[6] erythema multiforme,[7] erythema nodosum,[8-10] angioneurotic edema,[11] monilial vulvovaginitis,[2] photosensitivity,[12] herpes gestationis,[13] jaundice[14] and aggravation of pophyria variegata[15] as well as appearance of porphria cutanea tarda.[16]

In addition telangiectasis, spider angiomas,[2] acquired port wine marks,[17] purpura and aggravation of hereditary hemorrhagic telangiectasia[18] have been reported.

Summary

The course of two patients who developed eruptions secondary to oral contraceptives has been described. A brief mention has also been made of the reported cutaneous complications of the pill.

Please send reprint requests to Department of Dermatology, Wayne State University School of Medicine, 1400 Chrysler Freeway, Detroit, Mich.

References

1. Schaffner, F.: The Effect of Oral Contraceptives on the Liver, *JAMA* 198:155-157, 1966.
2. Jelinek, J. E.: Cutaneous Side Effects of Oral Contraceptives, *Arch Derm* 101:181-186, 1970.
3. Resnik, S.: Melasma Induced by Oral Contraceptive Drugs, *JAMA* 199:95-99, 1967
4. Strauss, J. S. and Pochi, P. E.: Systemic Estrogen Therapy of Acne, *Progress in Dermatology,* 2:7-10, 1967.
5. Cormia, F. E.: Alopecia from Oral Contraceptives, *JAMA* 201:635-637, 1967.
6. Letter from Department of Health, Education and Welfare, Food and Drug Administration, January 12, 1970.
7. Savel, H., Madison, J. F. and Meeker, I.: Cutaneous Eruptions and Vitro Lymphocyte Hypersensitivity, *Arch Derm* 101:187-190, 1970.
8. Holcomb, F.: Erythema Nodosum Associated with Use of Oral Contraceptives, *Obstet Gynec* 25:156-157, 1965.
9. Baden, H. P., Holcomb, F. D.: Erythema Nodosum from Oral Contraceptives, *Arch Derm* 98:634-635, 1968.
10. Matz, M. H.: Erythema Nodosum and Contraceptive Medication, *New Eng J Med* 276:351-352, 1967.
11. Wolf, R. J.: Angioneurotic Edema from Oral Contraceptives, *JAMA* 201:982 (Sept 18), 1967.
12. Erickson, L. R. and Peterka, E. S.: Sunlight Sensitivity from Oral Contraceptives, *JAMA* 203:980-981, 1968.
13. Morgan, J. K.: Herpes Gestationis Influenced by Oral Contraceptives, *Brit J Derm* 80:456-458, 1968.
14. Larsson-Cohn, V. and Stenram, U.: Jaundice During Treatment with Oral Contraceptive Agents, *JAMA* 193:422-426, 1965.
15. Dean, G.: Oral Contraceptives in Porphyria Variegata, *South African M J* 39:278-280, (April) 1965.
16. Roenigk, H. H. and Gottlob, M. E.: Estrogen-Induced Porphyria Cutanea Tarda, *Arch Derm* 102: 260-266, (Sept) 1970.
17. Goldman, L.: Oral Contraceptives and Vascular Anomalies, *Lancet II* (July) 1970.
18. Rowley, P. T., Kurnick, J. and Cheville, R.: Hereditary Hemorrhagic Telangiectasia Aggravated by Oral Contraceptives, *Lancet* I:474-475, (Feb) 1970.

Insulin Requirements in Childhood Diabetes Mellitus

By Arthur F. Kohrman, MD
William B. Weil, MD
East Lansing

One of the distinguishing characteristics of childhood diabetes is the frequent occurrence of marked lability in control and changing insulin requirements. Classic discussions of juvenile diabetes mellitus warn of "brittleness," and describe marked and often rapid swings from a state of good control to ketoacidosis or hypoglycemic shock. However, in at least some children, such wide variations in control are related to excessive insulin dosage, and readjustment will often result in significant improvement and a smoother course.

At the onset of juvenile diabetes mellitus, which usually occurs with some degree of ketoacidosis, the insulin requirement is highly variable and unpredictable; however, after the initial ketoacidosis is controlled (usually by the second or third day of therapy) one of the intermediate-duration insulins is begun, often in combination with a short-acting preparation. The general objectives of therapy at this stage, and throughout the patient's life, should be: (1) the least hyperglycemia and glucosuria compatible with a relatively normal, everyday existence; and (2) freedom from hypoglycemic reactions. A reasonably well supervised, self-regulated diet is usually compatible with these goals. In this early period of insulin regulation, the majority of diabetic children may need up to two units of insulin per kilogram body weight per day. For each child, the optimal distribution between intermediate and short-acting forms of insulin may be quite different.

The initial insulin requirement will tend to persist for a period of two to six weeks following initiation of therapy. Usually, there is then a rather abrupt decrease in blood and urine glucose which may be accompanied by frequent hypoglycemic reactions. When this occurs, the insulin needs drop rapidly over a period of two to seven days, and may even reach zero. The average child during this so-called "honeymoon" period will require less than a half a unit of insulin per kilogram per day, and ordinarily, he will remain stable at that level for an unpredictable period varying from two months to two years. When the rapidly declining exogenous insulin requirement is anticipated, hypoglycemia should not be a problem and concomitantly the tendency to ketosis and acidosis is also diminished.

Inevitably, the child's insulin needs *will* again increase: the change may occur gradually or abruptly. Often, the initiation of the increase is associated with a traumatic episode or infection. After readjustment over several months, the usual diabetic child's insulin dosage will approach one unit per kilogram body weight per day, and ordinarily remain in this neighborhood throughout the remainder of his life.

Not infrequently, children are seen with apparently greater requirements for insulin than usual. In a few of these, there is evidence for circulating insulin antagonists, and in others there appears to be true resistance to insulin derived from one or another animal species.

However, there is a large group of children, often unrecognized, in whom the high doses of insulin do *not* represent a real requirement, but are the results of a sequence of events which can occur gradually and unnoticed.

A common story is that of the child who has begun to spill a small amount of sugar, possibly even with some acetone, in response to a minor illness, or for an unknown reason. The parent or the physician will respond by increasing the insulin dose a few units. The glycosuria then disappears and the insulin remains at the new level. Then later, for some other minor reason, glucosuria may reappear, and again a small increment is made in the insulin dosage.

Doctor Kohrman is assistant professor and Doctor Weil is chairman, Department of Human Development, Michigan State University College of Human Medicine.

In this manner, the amount of insulin administered may be raised by the physician or family to higher levels than are appropriate in an attempt to maintain the patient in an aglucosuric state.

The result is transient hypoglycemia, which causes the child to be hungry. He eats more in response to the unrecognized hypoglycemia, and then has further glucosuria. The cycle is reinitiated with further elevations of insulin dosage. In such stepwise fashion, huge insulin doses can be reached and are often surprisingly tolerated. The result is a child receiving excessive doses of insulin, overeating in response to frequent hypoglycemia, and blood sugar swinging widely between hypoglycemia and hyperglycemia.

One clue to the diagnosis of such a situation is the regular recurrence of hypoglycemia or of a single aglucosuric period in a patient who is spilling sugar in relatively large quantities most of the time. Because of the marked glucosuria, urine volumes are large and the child generally exhibits a mild water deficit. Thus, during the brief periods of hypo- or normo-glycemia, urine volume will be very small and the bladder will remain relatively empty until the next period of hyperglycemia. The result is that all or nearly all urine tests will demonstrate glucosuria.

Such a circumstance occurs as a result of the very understandable concern of the physician or parent to prevent glucosuria. It is important to remember that in the otherwise well diabetic child, day-to-day fluctuations in urinary glucose are to be expected, particularly in those children who are on a self-regulated diet. These fluctuations ordinarily do not demand an immediate response; if the child does not show marked, recurrent ketonuria or symptoms of impending ketoacidosis, little is lost by temporizing. Often glucosuria disappears or diminishes spontaneously within a day or two, and no increment in insulin dosage is needed.

When the insulin dose exceeds the average for a child, the situation outlined above should be suspected. If this is the case, step-wise reduction in insulin dosage results in less hypoglycemia, then diminished hunger, and lowered caloric intake, and finally, lessened hyperglycemia. However, such dosage reduction may have to be made extremely carefully; occasionally this should be in a hospital setting for a child who has been treated with excessive insulin for a long period of time. Ketoacidosis could ensue rapidly during the period of insulin reduction, and the whole process may require several weeks or months.

Therefore, the possibility of chronic excessive insulin administration should be considered in every child whose dosage clearly exceeds the average of one unit per kilogram per day and who has been under treatment for a year or more. Appropriate management in these children can result in markedly reduced insulin requirements with all the benefits of improved control of carbohydrate metabolism.

Non-medical use of nitrous oxide:

A preliminary report

By Edward J. Lynn, MD
Mary James
Robert Dendy, MA
Lance A. Harris, MA
Richard G. Walter, PhD
All of East Lansing

Introduction

Ever since Sir Humphry Davy's treatise on the use of nitrous oxide[1] suggesting that the gas was not only an anesthetic/analgesic agent but that it provided pleasurable effects as well, its underground use has allegedly increased. Stimulated by an increasing number of anecdotal reports on the non-medical use of nitrous oxide (N_2O) a research team composed of members of the departments of Psychiatry, Psychology, the Counseling Center and the Drug Education Project of Michigan State University, the Drug Education Center of East Lansing and the Governor's Office of Drug Abuse was organized to examine several aspects of the N_2O scene.

We learned by surveying the literature that there were few publications that addressed themselves to the non-medical use of N_2O.[2-6] The few reports concerning the effects of N_2O on perception and cognitive functioning[7-12] were not carried out in a fashion approximating the usual street use of the drug. We set about to:

1. Survey Mid-Michigan to assess the prevalence of use of N_2O.
2. Establish a safe method of using the agent that approximates the usual use of N_2O.
3. Assess cognitive functioning during various time periods after volunteers became "high" on N_20.

1. Survey

A. *Method*

Members of the Drug Education Center as well as drug users in the community were asked to informally survey the "drug scene" to determine if and how N_2O was being used, and if its use was increasing.

B. *Preliminary Findings*

N_2O is being used in mid-Michigan in various ways.

Several individuals reported having been to parties where a professional (doctor, nurse, dentist, inhalation therapist, researcher) provided N_2O for the participants to "turn on." There were many who noted using the N_2O contained in aerosol cans (either whipped cream or motor starter) and others who tapped the gas from large tanks in restaurants used for preparing whipped cream. At the recent Goose Lake Rock Festival the gas was widely sold for 25 cents a balloon. We also made contact with a mystical-religious group that used the gas to accelerate arriving at a transcendental-meditative state.

Few used elaborate equipment (i.e., N_2O-O_2 mixes with sophisticated valves and masks). Most used balloons or plastic bags and either held a deep breath of pure N_2O or rebreathed it. No adverse effects were reported by any of the more than one hundred individuals surveyed. There was a general impression that the use of the gas was on the increase.

2. Pilot Study

A. *Method*

Ten volunteers—seven men and three women (ages 21-42) were used. Five had no previous drug experience other than alcohol or prescription drugs ("naive") and five had previous drug experiences including marijuana, LSD, mescaline, heroin and others ("sophisticated"). All subjects were given complete physical exams and hematocrit determinations were made. The subjects were asked to take a deep breath of pure N_2O from a balloon or rebreathe it. Onset of peak effects was timed and subjective reports were gathered.

B. *Results*

All of the subjects reported an exhilarating "high" within 15-30 seconds after inhalation. The initial peak effects lasted from 2-3 minutes and were described as pleasurable by all. All described a "head rush"—tingling or warmth around the

---

Doctor Lynn is assistant professor of psychiatry in the College of Human Medicine; Miss James is with the Drug Education Project; Mr. Dendy is with the Counseling Center; Mr. Harris is with the Department of Psychology and Doctor Walter is an assistant professor of business finance in the College of Business. All are with Michigan State University.

face and head and auditory illusory or hallucinatory phenomena. Rebreathing the gas prolonged the peak.

All of the subjects described a state of well being that lasted beyond the peak from minutes to hours (somewhat longer for the drug-sophisticated group than the drug-naive group). A "reverse tolerance" was described by most – more intense or prolonged experiences with subsequent trials of the same dosage. Several volunteered that headaches, shoulder pain and mild depression was ameliorated during the experience and did not return.

3. Cognitive Functioning

A. *Method*

Three tests were utilized to assess cognitive functioning before, during and at five and 10 minute periods after the onset of the N_2O effects. These included the digit symbol test (DS) from the Wechsler Adult Intelligence Scale[13] with parallel forms, the symbol analogies test (SA)[14] with parallel forms, and an addition test (AD) with parallel forms. The subjects were 12 men and 12 women (ages 19-30), half of whom were drug naive and half sophisticated. Four periods of test administration were scheduled at 24 hour intervals. The temporal order of administration, (during a "high," post-five minutes, post-10 minutes) were counterbalanced so that all subjects received all three tests in all three temporal orders. The data were then subjected to analysis of variance.

B. *Results*

The entire group ($n=24$) demonstrated significant cognitive defects ($\alpha < .01$) during the "high" for the DS and AD but not the SA. Significantly lower performances were observed for the number correct, number tried and percent correct. There were no significant differences between pre-tests and tests during the five and 10 minute periods. The naive group showed no significant performance differences from the sophisticated group save for one area – the drug users did significantly better on SA testing at pre- and post-five minutes ($\alpha = .04$).

Subjective responses were similar for this group of 24 as the pilot group of 10. More of the naive subjects tended to report somatic sensations (warmth, tingling) and the sophisticated subjects tended to report "psychedelic" experiences – comparing the high with that achieved by other drugs. Adverse experiences were minimal (seven naive, one sophisticated) and included transient nausea, bloating, pressure in the head, dry throat and mild suspiciousness.

Discussion

The non-medical use of N_2O, although not rampant, seems to be on the increase in mid-Michigan. The usual use of the gas (from a balloon) appears to be a safe procedure but one needs to assess the decrease in cognitive functioning, as measured by DS and AD testing, which occurs during a high. These defects, however, are transient and functioning returns to normal within five minutes. Users should be alerted to the possibilities of impaired performance during the peak effects of the drug. There seems to be little difference in the effects on cognitive functioning when drug-naive subjects are compared with drug-sophisticates. Subjective responses also seem to be similar with greater somatic sensations among the naive subjects. The drug users tend to have longer after-effects which may have more to do with set and setting than with the physiological effects of N_2O.

References

1. Davy, J. (edit): The Collected Works of Sir Humphry Davy, Bart. Vol. III: Researches, Chiefly Concerning Nitrous Oxide. Smith, Elder and Co., 1839.
2. Agnew, L. R. C.: On blowing one's mind. (19th Century style) *JAMA* 204:61-62, 1968.
3. Lingeman, R. R.: Drugs from A to Z: A Dictionary. McGraw-Hill Book Co. 1969 (p.183).
4. Simpler, C. A. and Webster, R. C.: Industrial uses of nitrous oxide – no laughing matter (chapter 9) of Clinical Anesthesia, edited by D. Eastwood, Davis Co., 1964.
5. Dillon, J. B.: Nitrous oxide inhalation as a fad: Dangers in uncontrolled sniffing for psychedelic effect. *Calif Med* 106:444-446, 1967.
6. Danto, B. L.: A bag full of laughs. *Amer J Psychiat* 121:612-613, 1964.
7. Parkhouse, J., et al: Nitrous oxide in relation to mental performance. *J Pharmacol and Exp Therapeut* 128:44-54, 1968.
8. Westerlund, R. L., Pittinger, C. B., and Reger, S. N.: The effects of nitrous oxide on responses to hearing, *Anesth and Analges* 40:238-241, 1961.
9. Robson, J. G., Burns, B. D., and Welt, P. J. L.: The effects of inhaling dilute nitrous oxide upon recent memory and time estimation. *Can Anaes Soc J* 7:399-410, 1960.
10. Frankenhaeuser, M.: Effects of nitrous oxide on subjective and objective variables. Rep Psychol Lab, University of Stockholm. No. 141, 1-9, 1963.
11. Steinberg, H., and Summerfield, A.: Influence of a depressant drug on acquisition in rote learning. *Q J Exp Psychol* 9:138-145, 1957.
12. Steinberg, H.: Selective effects of an anaesthetic drug on cognitive behavior. *Q J Exper Psychol* 6:170-180, 1954.
13. Wechsler, David: The measurement and appraisal of adult Intelligence. Baltimore, Williams and Williams, 1958.
14. Norrell, Gwendolyn: A study of ambiguity in nonverbal tests. Unpublished Doctoral Dissertation, University of Colorado, 1957.

Congestive Heart Failure

Due to Coarctation of the Aorta In a Newborn Infant

By Kirtikant M. Shah, MD
William W. Nicholls, MD
Flint

In this era of computerized medical care, physical examination is still an important part of a patient's care. The following case illustrates this statement.

Case Presentation

An 11-day-old white boy was admitted to Hurley Hospital on March 16, 1970. He had been born at full term, with a birth weight of eight pounds, five ounces. There were no complications immediately after birth, or during his stay in the nursery. His feedings consisted of a proprietary formula, two to three ounces every four hours. On the day of admission his mother noted that his face was blue and that he was breathing rapidly. He started refusing his feedings. There was no history of fever, cough, or vomiting.

Family history: Both parents were healthy. There was no history of heart disease in the family. The mother denied any febrile illness prior to, or during delivery of the infant.

Physical examination: The infant appeared ill. His color was ashen gray and circumoral cyanosis was seen. Muscle tone was poor. The heart rate was 180 beats per minute and was regular. Respiratory rate was 60 per minute, with occasional apneic spells. On admission he weighed 4 kg (8 lb, 8 oz). His length was 46.5 cm (20.5 inches). His head circumference was 35.5 cm (14 inches). The anterior fontanelle was open and had normal tension. The chest was symmetrical. The heart did not seem enlarged to percussion. Heart tones were normal and no murmurs were heard. Lung fields were clear to percussion and auscultation. The abdomen was soft. The liver was palpable four finger-breadths below the right costal margin. The spleen was palpable one finger-breadth below the left costal margin. Femoral pulsations were absent on both sides. Radial pulses were felt to be normal. The reflexes were sluggish and the child appeared to be weak.

Clinical course

The patient was admitted to the nursery with a diagnosis of congestive heart failure, probably due to coarctation of the aorta. On the second day after admission the blood pressure measurements by the flush technique were 160 mm of mercury in the upper extremity, and 50 mm of mercury in the lower extremity. A systolic murmur, Grade 2-3/6 was heard over the left parasternal region and was not transmitted.

Laboratory studies

Hemoglobin was 15.3 gm/100 ml; hematocrit was 49%. White blood cell count was 9,500 cu mm, with 16% bands, 44% neutrophils and 40% lymphocytes. Serum electrolytes showed a chloride of 104 mEq/L, CO_2 of 20.7 mEq/L, a sodium of 136 mEq/L, and a potassium of 5.6 mEq/L. Serum calcium was 4.0 mEq/L, phosphorous was 6.9 mEq/L. Blood urea nitrogen was 11.3 mg/100 ml. Cultures from the throat, umbilicus and blood were negative. An electrocardiogram was done and showed no abnormal features.

Chest X-rays showed left atrial and left ventricular enlargement with increased pulmonary venous markings, suggestive of left ventricular outflow obstruction.

The patient was seen by a cardiologist and a left cardiac catheterization study was done. Direct brachial artery pressure was recorded as 170/75 mm of mercury. Cine-angiogram showed extreme coarctation of the aorta. Complete studies were not done because of the poor clinical condition of the patient.

The child was placed in an incubator with his head elevated. He was treated for congestive heart failure with oxygen, intravenous fluids, digoxin and mercurhydrin.

Within a period of 24 hours the infant improved remarkably. His color became pink without oxygen, the heart rate fell to 130 beats per minute, respirations were decreased to 48 per minute and were regular. On the third hospital day oral feedings of glucose water and then formula were started slowly. Chlorothiazide syrup was given in a dose of 40 mg/kg per day on alternate days. The infant was seen by a cardiac surgeon who advised prompt surgical treatment.

Doctor Shah is a resident in pediatrics and Doctor Nicholls is director of the Department of Pediatrics, Hurley Hospital, Flint.

The day prior to the scheduled operation, the patient suddenly became more seriously ill. He was cold and clammy and his heart rate increased to 180 to 200 beats per minute. Generalized cyanosis was present. He was unresponsive. That evening an emergency operation was done. During the operation the child had three cardiac arrests which were successfully treated. The ductus arteriosus was ligated and the narrowed portion of the aorta was excised. An end-to-end anastomosis was done. At this stage of the operation he had another cardiac arrest from which he was unable to be resuscitated.

Postmortem examination showed bicuspid aortic valve, cardiomegaly, congestion of the lungs, liver, spleen, kidneys, and brain. Subserosal hemorrhages in the pericardium, epicardium, and pleurae were seen, as well as the operative changes.

Discussion

Coarctation of the aorta is the most common malformation causing cardiac failure in the newborn. It was found in 59 cases out of 288 infants under one month of age with congenital malformations of the heart coming to autopsy at Johns Hopkins Hospital.[1] In Abbott's series of 1,000 autopsies of children of all ages, it was the third most common lesion. As an isolated lesion it is a rare anomaly. It was found in six out of 59 cases in the series of Rowe and Mehrizi, and in 18 out of 108 cases of Glass, et al.[2] The associated cardiac defects in order of decreasing frequency were patent ductus arteriosus, ventricular septal defect, complete transposition of the great arteries, bicuspid aortic valve, and other combinations. It was found in 17% of cases of Turner's syndrome.

A majority of infants with this malformation develop signs suggestive of congestive heart failure rather early in life. The triad of tachypnea, tachycardia, and feeding difficulty soon becomes obvious and may progress to severe dyspnea, cyanosis and shock-like state. Femoral pulsations are weak or absent, and disparity of excursions between the femoral and brachial pulses is usually present. Any infant who shows these signs should be suspected of having coarctation of the aorta. These patients may or may not have murmurs. Cardiac catheterization and cine-angiography should be used to establish the proper diagnosis.

Although diagnosis is usually not difficult, the management of this problem and particularly the decision whether to use surgical or medical treatment are more troublesome. Most authorities agree that primary treatment should be medical. The child should be treated for congestive failure. Rowe and Mehrizi believe that patients who relapse, or do not respond to medical therapy, should be treated surgically.[1] There is, however, a difference of opinion regarding the timing of the operation when the anomaly is discovered in an infant. Gross, who first operated on patients with coarctation of the aorta in this country, reviewed his experience with his first 270 cases in 1953.[3] He stated that it was the policy of his group to avoid operation on babies under the age of one year whether or not they were having cardiac symptoms. He felt that if they survived the first year, they were apt to go through childhood without too much difficulty. The best chance for a satisfactory operation would then come later, between eight and 12 years of age.

In contrast to this opinion, Ziegler and Lam[3] believed that operation should be done if it is thought that survival is unlikely without correcting the obstructive lesion. They say if one waits until the infant's condition has deteriorated, the chances of a successful operation will be decreased. In their series of 31 cases, 10 had operations during the first year of life and all were successful. Similarly, Waldhausen, et al,[4] state that if the infant does not show significant improvement after 12 hours of medical therapy, operative intervention is indicated on an emergency basis. Gerbode, et al,[5] believe that the operation should be done in the first two years of life if the following conditions prevail: 1) onset of congestive failure in early infancy; 2) failure not completely relieved by adequate medical therapy; and 3) failure to thrive. They state that delay in recommending surgery may jeopardize the chances of successful correction of an operable lesion. In their series of 15 operated patients one died. In review of his 12 years of experience, Glass[2] had 91% and 80% mortality in infants under two and four weeks of age respectively who were treated with digitalis alone. Thus, he believed that congestive failure occurring under six weeks of age in patients with coarctation of the aorta was not greatly benefited by digitalis therapy alone. He feels that surgery is indicated in the first four weeks of life in spite of its high operative risk, since there are few survivors of this critical period.

Presence of an additional anomaly like ventricular septal defect or patent ductus arteriosus, makes the prognosis still poorer. Waldhausen, et al,[4] advise doing pulmonary artery banding in addition to surgical relief of the aortic obstruction if associated ventricular septal defect is present. Comparing the mortality figures, Glass' series of 108 cases showed surgical mortality of 41% as compared to 87% medical mortality.[2]

Seven cases of coarctation of aorta were seen at Hurley Hospital during the last 10 years. Of these seven cases, three were adults. Two had successful operations at Hurley Hospital and one was transferred to a university hospital. The remaining four cases were all less than ten days of age. A clinical diagnosis of coarctation was not made in any of these four cases. All were treated for congestive

DRUG THERAPY PROBLEMS

By Robert E. Pearson, MS
Persis Mehta, PhD
Ann Arbor

Q. What is the latest development in the detection of serum hepatitis in donated blood? (A. R., Ann Arbor)

A. A more sensitive screening test for the presence of the serum hepatitis antigen (Australia or SH antigen) in donated blood has been developed. According to Alfred M. Prince, MD, pathologist at the New York Blood Center, the test, which employs high voltage immunoelectrophoresis, will detect at least 50% and perhaps up to 90% of carriers of the antigen. The currently used Ouchterlony agar gel diffusion technique detects only 25% to 30% of carriers. At the present time, antibody used in the tests is obtained from the blood of hemophiliacs, many of whom have antibody to the Australia antigen due to receiving multiple transfusions.

Q. Can sodium iodide solution be used intravenously? (M. K., Ann Arbor)

A. Sodium iodide is the iodide used intravenously when this route of administration of the ion is indicated. Intravenous therapy is indicated in severe thyroid crisis and paroxysm of asthma intractable to other therapy. Because of the ability of iodides to lower the viscosity of bronchial secretions, sodium iodide has been used I.V. to prevent postoperative atelectasis. The dose of sodium iodide I.V. is 1 or 2 Gm. in 10 to 20% solution, injected every 2 to 6 days.

Q. What is the action of oral zinc in wound healing? (S. F., Jackson)

A. Several reports in the literature demonstrate that oral therapy with zinc significantly promotes healing in man. Acceleration in wound healing is greatest during the stage of epithelialization. Zinc probably acts primarily at the wound site where it is incorporated into enzyme systems. The use of oral zinc is still investigational. Zinc is also being presently evaluated as an agent to treat leg ulcers in patients with sickle-cell anemia, to alleviate the symptoms of occlusive vascular disease and to promote healing of psoriatic skin lesions. The usual dose is 220 mg. of zinc sulfate ($ZnSO_4.7H_2O$) 3 times daily in order to supply 150 mg. of elemental zinc per day.

Q. How many milliequivalents of sodium does Kayexalate® release? (J. Y., Ann Arbor)

A. Kayexalate® (sodium polystyrene sulfonate) is a sulfonic cation exchange resin which has an exchange capacity of about 3.1 mEq. of potassium per gram of resin. Since potassium ions would displace equimolar quantities of sodium ions, it follows that the amount of sodium released from the resin would also be 3.1 mEq.

Doctor Pearson is project coordinator and Doctor Mehta is associate project coordinator of the Michigan Regional Drug Information Center, University Hospital, Ann Arbor.

NEWBORN HEART FAILURE/Continued

heart failure. All four patients expired and the diagnosis was made at autopsy. Two of them also had hyaline membrane disease, and one had multiple cardiac anomalies.

Summary

A case of congestive heart failure due to coarctation of the aorta in an 11-day-old infant was presented. A brief review of the literature regarding differences of opinion of the management of this illness was discussed. Seven cases of coarctation of aorta seen at Hurley Hospital during the last ten years were briefly reviewed. In many instances the diagnosis can be made in the newborn nursery if palpation for femoral pulsation is a part of the routine examination of the newborn.

References

1. Rowe, R. D. and Mehrizi, A.: *The Neonate with Congenital Haert Disease,* Vol. V, Major Problems in Clinical Pediatrics, Philadelphia, W. B. Saunders Co., 1968, pp 123-139.
2. Glass, I. H., Mustard, W. T., and Keith, J. D.: Coarctation of the Aorta in Infants. A Review of Twelve Years Experience, *Ped.,* 26:109, 1960.
3. Ziegler, R. F., and Lam, C. R.: Indications for Surgical Correction for Coarctation of the Aorta in Infancy, *Am. J. Cardiol.,* 12:60, 1963.
4. Waldhausen, J. A., et al: Management of Coarctation in Infancy, *JAMA,* 187:270, 1964.
5. Gerbode, F., et al: Surgical Aspects of Heart Disease in Infants Under the Age of Two Years, *Am. J. Surg.,* 108:226, 1964.

Perinatal Tips

By Paul M. Zavell, MD
Detroit

The following case from the files of the Wayne County Medical Society Perinatal Mortality Committee is presented as an aid in continuing education.

Maternal

This was the fifth pregnancy of a 25 yr. AB Rh Positive Black mother. Mother was a very poor historian but we know all other pregnancies resulted in living well children. She received no prenatal care but insisted her pregnancy was normal. Upon questioning she did admit to some leaking of her "bag of waters" for sometime. She had a fairly quick but not precipitous labor (First stage of 5 hr. 25 minutes, Second stage of six minutes and Third stage of three minutes). Her post partum course was uneventful.

Fetal

A seven pound eight ounce Black Male Infant was born in early A.M. – seemed normal at initial physical after birth and half hour later by a pediatrician. By five hours of age the respirations were between 50 and 60 per minute with some grunty respirations,
and the heart rate was 140 per minute. He had
98.6° F (R) temperature with pale hands and fe
The infant was placed in Oxygen and seemed
hold his own. At seven hours of age he was
examined by the pediatrician who noted generaliz
paleness, grunting, weak cry and scattered petechi
spots on the face, neck and upper chest. His i
pression was "CNS Anoxia." A CBC showed Hem
globin of 16.0 gm, Hct of 48, Rbc of 4-44 x 10
WBC of 7600 with PMN of 23, Bd of 26, Lymph
43, Mono percent 08 and Normoblasts 25/100 WB

During the next four hours the temperatu
dropped to 98° (R) and respiratory rate was 60
80/minute but the infant became very letharg
and refused to suck. The doctor resaw the infa
and felt his CNS Anoxia was "getting worse" a
there was little that could be done. Two hou
later respirations became irregular and abdomin
and the infant soon expired. An autopsy show
Neonatal Pneumonia, Massive, organism not
termined.

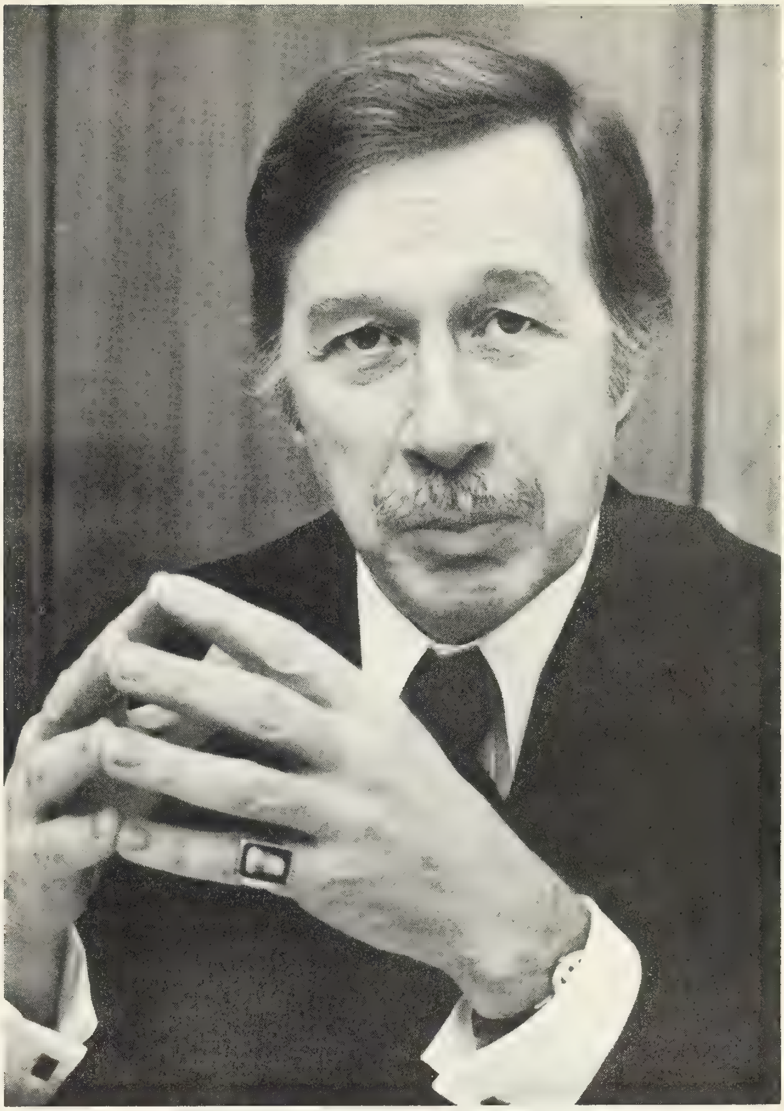
Perinatal Committee Comments

1. When the membranes have been ruptur
over 24 hrs. the resulting infant should be susp
of infection and watched. If symptoms should
velop, appropriate studies (cultures, X-Rays, et
should be initiated and antibiotics started until
infection is proved. Infant should be treated as
sepsis using Penicillin and Kanamycin.

2. Clues such as temperature irregularity, L
WBC (infants usually have 15,000-25,000 WBC'
paleness, grunting and poor suck should clue o
as to the possibility of infection in the newbo
period.

3. Neither the pathologist nor the commit
were sure of the significance of the petechial li
spot (sterile by culture and smear) but believe th
probably were related to the infection.

Doctor Zavell is chairman, Neo-Natal and Hospital Care Committee, Michigan Chapter, A.A.P., and chairman, Perinatal Mortality Study Committee, Wayne County Medical Society.



Warren F. Tryloff

MSMS staff reorganization

Warren F. Tryloff, new MSMS director, discusses the impact of changes in MSMS staff structure effected as a result of the 1970 MSMS management study.

Question:

Please describe some of the more important structural changes that have been made in the MSMS staff reorganization.

Tryloff: The management study that was authorized by The Council and the House was designed to review the efficiency and effectiveness of the MSMS staff structure in relation to the objectives set by the MSMS leadership. Several important recommendations were made in the study, none of them sweeping. The most visible change was that the study recommended a single director with the rest of the staff organized into three departments headed by a manager who would be responsible for employees under him. He, in turn, would report to the Director. This is quite a simplification over the previous organization of staff and we think an efficient one since it establishes responsibility and accountability for each staff position.

". . . . The reorganization implies that we're going to move ahead at a faster pace. . . ."

Question:

Wasn't the study to be in two parts and Phase I just completed?

Tryloff: Yes, the original concept did have two phases. The first was to review the efficiency and effectiveness of the existing staff and to make recommendations for interim staff structuring.

The second phase of the study has not yet been undertaken. When it is done, it will consider the efficiency of the structure of MSMS and its relationship with its constituent medical societies and specialty organizations. MSMS is a representational democracy which has built into it a certain sluggishness and slow reflexes.

The study, for example, might review the organization in light of the times and urge some structural changes to provide for a quicker response to critical issues of the day. The scope of the Phase II study is certainly an extremely broad one and can't be detailed, I don't think, beyond the general broad outline that has been reported to the House.

Question:

Has there been any increased emphasis in the MSMS thrust caused by the staff re-structuring?

Tryloff: Perhaps not increased emphasis but increased responsibility in three important areas. One department is for the general daily operations of the Society and economic matters of concern to MSMS; the second is communications, both within the profession and outside of it, including the publication of *Michigan Medicine;* and the third important department is legislative relations. The manager of this department is a new employee, Mr. Bruce Ambrose, who is an experienced man in dealing with the Legislature. He and his staff are responsible for all contacts with government, with governmental medical programs, MDPAC, and like concerns.

Mr. Herbert Auer continues as manager of the Department of Communications and Mr. Richard Campau, a former employee of MSMS, has returned to take over the Department of Operations and Economics.

Question:

What are the results of the reorganization as you see them?

Tryloff: There is both a tangible and intangible result, I believe. It was absolutely essential to indicate to both the MSMS membership and to our publics, particularly the Legislature, that there is life and movement and ability to change within the structure of MSMS. This is a viable organization and the reorganization implies that we're going to move ahead at a faster pace, reacting to the times in a more direct and responsible way than we have been able to in the past.

By giving staff responsibility and holding them accountable for their recommendations and actions I think that the leadership of the Society will be supplied with the best that each man has to give. No longer will a man be buried in a staff structure as a nameless staff assistant. Each now has visibility and can make his expertise have an impact on those decision-makers who need to rely heavily on the background work-ups and recommendations of key staff.

Also, we are able to recognize where extra staff help may be required; for example, we saw the need for increased emphasis on medical economic research. Thus, we are creating a Bureau of Economic Information under the Operations and Economics Department. We are now interviewing candidates for the chief of this Bureau and hope within 30 days to have a fully operating department. An Acting Director is presently serving as research supervisor on the two studies now authorized. We are in the process of doing a fee study and also a cost-of-doing-business study for physicians' offices.

Question:

Have any economies been made because of the management study?

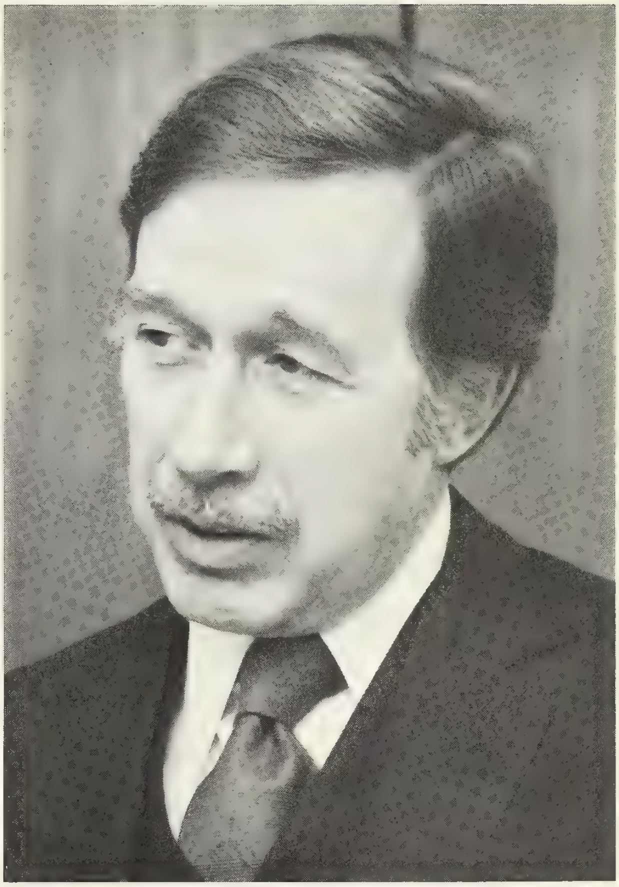
Tryloff: Perhaps economies isn't the proper word, but I'm sure The Council agrees that more effective and efficient use of the MSMS monies is now being made. Some staff changes have been made, with some people leaving and some other people being added to the payroll. The net effect may not be a reduced expenditure, but an improved end-product.

Question:

Did the management study make any recommendations for field offices?

Tryloff: On the contrary, the study recommended that the MSMS operation be concentrated in the East Lansing headquarters to provide adequate supervision over all employees. However, the study recognized that there was a real need for contact with the membership and leadership of the component societies, particularly in the Wayne metropolitan area.

As you recall, there has been for many years a "Detroit office". This is now terminated, but there is increased activity in the metropolitan area because our staff, being only an hour and twenty minutes away by car, is far more available than ever before. We believe that each of our staff has a specific area of expertise which is on call to all component societies. It is impossible to have a



". . . . The study recognized that there was a real need for contact with the membership and leadership of the component societies. . . ."

"Our great problem, it seems to me, is that this is the age of the simplifiers."

jack-of-all-trades type of person function in a field office, wherever it might be in Michigan, who is able to answer any and all questions and serve as an expert in any and all fields.

Frankly, the AMA has tried the field office technique and is now in the process of re-evaluating that effort. The experience that most state medical society staffs have had with the AMA field office is that it leaves much to be desired, since all major questions have to be funneled back to Chicago. In the Wayne County area, for example, MSMS is helping Wayne County officers and the physician-members in a year-long series of news conferences since Detroit is the communications capital of Michigan. Mr. Auer is responsible for this project. Mr. Ambrose, on the other hand, is the person to work with the metropolitan area people in matters of legislation. The Bureau of Economic Information, of course, will have specific interest in the medical economics of the Detroit area.

Question:

What does the MSMS staff look forward to in 1971?

Tryloff: We've only become fully organized since December 1, upon the arrival of Mr. Ambrose, but I think we've had enough running-in time to come to some basic judgments. I believe the staff all agree with me that 1971 is going to be a crucial time of change for health and medical care. While the main battlefield may well be in Washington, there will be some major skirmishes in the legislative halls in Lansing.

Our great problem, it seems to me, is that this is the age of the simplifiers. The Swiss historian Jacob Burckhardt said "the essence of tyranny is the denial of complexity." He was right. This is the great temptation of the time. Presidential Counsel Daniel Patrick Moynihan said that simplification is the great corrupter and must be resisted with purpose and with energy. He went on, "What we need are great complexifiers, men who will not only seek to understand what it is they are about, but who will also dare to share that understanding with those for whom they act."

In 1971, our staff must understand these complexities, share this understanding with the MSMS leadership, help to form a cohesive and concerned membership and aid the profession in convincing those who would change health care that it is a complex problem of a dimension almost beyond comprehension and that simplistic solutions will serve no one.

Study of the Quality of Personal Medical Care in 22 general, short term hospitals and *in physician offices* on all the islands. This is a most unique study and one which hopefully can provide many answers to the vexing problems yet to be faced in implementing a useful system of Peer Review or "P.S.R.O.".

A Profession Standard Review Organization fostered by the MSMS should have fewer problems in Michigan than in many other states with less background in professional review. These problems are a likely concern of the House of Delegates and our council in the coming year.

An unfortunate choice of words with implied meanings is present in the use of "Standards" rather than "criteria." Standards of professional care implies minimal accepted performance, a rigidity, and legal requirement. None of these should be a part of "medical care evaluation." Criteria for optional medical care, however, must imply attainable levels of excellence, responsiveness to change in diagnostic and therapeutic capabilities, and a professional responsiveness to recognize deficiencies. A better choice of title would be Medical Care Review Organization instead of Professional Standards Review Organization.

Physicians must have national leadership; only the AMA qualifies

By Donald N. Sweeny, Jr., MD
Detroit

(Doctor Sweeny is chairman of the MSMS delegation to the AMA.)

Do the physicians of the United States want a major, national professional or not?

The AMA belongs to physicians. They founded it because they saw a need for a national organization. They have supported it for 123 years.

Now, in the minds of some of them, there seems to be a question as to whether they still need it. If they should decide not to support the American Medical Association, they're going to have to decide a lot of other things.

And if they do, the American Medical Association certainly is the answer — it has a rich heritage and I am confident it is moving effectively into many new areas of concern.

The doctors who think it's not worth $9.16 a month to maintain a strong and active AMA are going to have to decide who they want to do the things the AMA has been doing to preserve the professionalism of medicine.

Who would they like to see represent physicians in the accreditation of medical schools, postgraduate education and continuing education?

To whom would they give the responsibility as the developer, the repository and the arbiter of medical ethics?

Who would they want to see represent the interests of physicians in the accreditation of hospitals and in the establishment of essentials for training allied health personnel?

The AMA does those things and many more, all of them to protect the interests of physicians and their patients . . . to make sure the best possible medical care is available from the most competent possible professionals and allies. In addition, the AMA is the voice and the hands of the medical profession, speaking to and helping the public and the government in a way that no other organization — and no smaller group of physicians — can match.

Continuing programs

Consider just a few recent and current examples.

The AMA has supported — in and out of congress — more federal money for medical schools and students. It encourages innovation in medical education to produce more physicians faster, without loss of quality.

It sponsors conferences and has long offered leadership in such areas as occupational health, the cost of health care and the fight against pollution.

It is proposing a national health insurance program — Medicredit — that will assure the availability of care to all without endangering its quality and without coercing either the providers or the recipients of it. It is proposing legislation to create peer review and utilization review systems in all the states through the state medical associations.

The AMA's Education and Research Foundation has underwritten more than 40,000 loans to medical students, interns and residents, totaling something over $42,000,000.

The Association has sponsored many programs to provide leadership and examples in the field of health care for the poor. Among them are proposed co-sponsorship of an inner-city health center . . . donation of two mobile health care units to a Chicago slum area . . . financing of health care projects by the Student AMA . . . and encouragement of innovation in methods of health care delivery in areas of need.

And the AMA has supported a large number of federal programs, including regional medical programs . . . comprehensive health planning . . . allied health training . . . Hill-Burton . . . antipollution measures . . . family planning . . . migrant workers' health programs . . . and help for schools of public health.

New programs

Equally important are new programs planned for the future, which can be carried out only if the AMA has the financial support from its members that is necessary. Let me cite a few:

(1) The AMA needs to expand its research activities, making this organization the recognized

Doctors', Wives' art show planned Oct. 6

If you are a physician with a talent for painting, sculpture, pottery, photography or crafts, take up brush, carving knife, wheel or camera and keep Oct. 3 in mind.

For when Michigan Physicians travel to Grand Rapids early this October for the MSMS Annual Session, all will be eligible to enter the Doctors and Wives Art Show, to be staged at the Civic Auditorium.

Entries will be restricted to Michigan doctors and their wives, and may be shown under seven categories: 1) painting—oil polymer, lacquer; 2) painting—water color, casein, tempora, gouache; 3) sculpture—wood, stone, metal, ceramic; 4) ceramics; 5) drawing and graphic art—all print techniques; 6) three dimensional design—weaving, stitchery, jewelry, and 7) photography.

Sponsor of the art show is the Woman's Auxiliary to MSMS. Chairman is Mrs. William Sprague of Grand Rapids.

Many of the entries will be on sale, as exhibitors may display some items for sale and others for judging. There is no limit to the entries per doctor or wife. Judging will be conducted Sunday evening.

AMA LEADERSHIP/Continued

expert in all phases of the economics of medicine. The first step has been taken by creating within the staff the Center for Health Services Research and development.

(2) A committee of the Board of Trustees is now exploring workable guidelines for AMA involvement in the use of computers in medical practice. Many organizations are interested in that subject, but only physicians can best determine how electronic data processing can work for the practicing physician.

(3) The AMA is tackling perhaps the most critical problem facing physicians today — professional liability insurance — by seeking to set up programs of coverage in cooperation with state medical associations.

(4) The AMA needs to carry forward programs involving the recruiting, education, training and proper utilization of both existing and newly developed allied health professionals and technicians — including the physician assistant.

(5) The AMA seeks to carry out new communications programs to the public.

All of those things need to be done. They need to be done for the people of the nation and for the physicians of the nation. They can best be done by physicians themselves, through a strong and effective national organization . . . with equally effective state and county medical societies.

Indeed, there is a need for every small and large medical organization to do its part to strengthen and improve care for the nation's people. Every society, every specialty group, must accept its responsibility.

But there must be national leadership. The only organization that can qualify, today or in the future, is the AMA. That's why you . . . and I . . . and all the physicians of this nation should support the AMA.

Your opinion please

Suggest ways by which doctors may be stimulated to become more involved in area-wide comprehensive health planning.

William G. Birch, MD
Kalamazoo

Since the development of the South Central Michigan Health Planning Council I have been impressed by the tremendous scope of its projects. Besides an excellent administrative staff, Health Planning Councils need the service of a great many professionals who have a spirit of community dedication. I realize that we are all called upon to do community service in addition to our exacting professional tasks. I can think of no way that a physician, especially a new physician looking for rewarding community service, can contribute so much, so efficiently, as through activity within the Health Planning Council.

Planning Councils work essentially through committees, where the physician can demonstrate his expertise and his special interest such as in environmental health, public health, mental health and medical man-power. Doctors who wish the maximum participation for their area in federal funding would do well to seriously consider work in Health Planning.

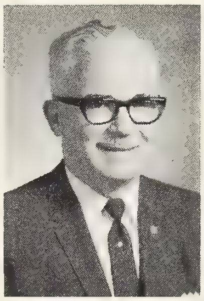
In the one and one half years of our existence, we have been involved in decisions concerning two new hospitals, additions and renovations to other hospitals, the implementation of a dental assistant program in a community college, and further extension of our services. Surveys on medical manpower are being conducted, and we expect to become involved in the development of a new paramedical school as well as a clinic in a blighted area for the poor.

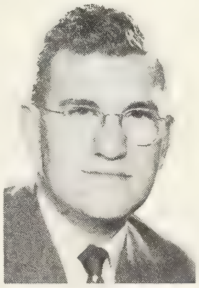
There is no limit in health involvement a planning council can exceed. If we on the local level are to maintain a degree of control over what happens in health care for our people, the Health Planning Council is a big step in the right direction.

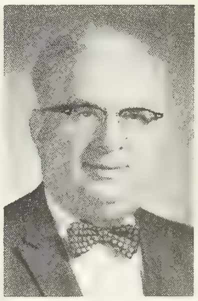
Richard D. Coak, MD
Tecumseh

Six years of vital involvement in comprehensive health-planning have convinced me that we as physicians must become aware of developments in this area, and must realize our responsibilities in the overall attempt to dispense medical care to the public by this mechanism.

Such rapid developments have occurred during the past two years in the development of this state-


Dr. Birch


Dr. Coak


Dr. Heideman

wide organization under governmental direction that it is essential for us as physicians to keep our hand in the development and evolving of the "trend." If we don't, catastrophic changes may well take place right in our own practices, hospitals and cities, and we will have sat still without attempting to participate at all.

The physician must recognize *his* position on the "team." As the chief "dispenser" of health care, his advice and counsel are avidly desired as a leader in the health-planning areas by the large number of interested laymen, termed "health receivers."

I've seen this happen in my own area-wide health planning work, and I've seen some physicians shy away from their roles in sitting down and planning the direction of the future. But they often then are the greatest critic of the "things they're doing to us," for there is no doubt that this organization may well represent the last voluntary group effort to keep some sense of private practice in our own areas of practice.

We must as physicians also realize that there is unnecessary duplication of medical care facilities currently existing, and play a vital role in the developments to recognize and correct this. This means being "open" to suggestions, and changes and directing the manner in which this problem is tackled. We must recognize and accept the overall objective: Better health care for all, and then we can overcome petty "competitive" differences in achieving this.

As physicians, our contributions to developing trends in comprehensive planning are not only helpful, but essential.

For in areas of Health Manpower, where coordinated efforts in each individual area can increase availability or more physicians and paramedical personnel to help our own profession, this requires active cooperation and work with others in health fields. In physical health improvements, and in mental health areas, again, we need to realize that our ideas and advice should be coordinated with those of other "health professionals."

As physicians, we can become stimulated to be more involved in comprehensive area-wide health planning only after we accept the fact that it appears to be here to stay, has a determining and guiding effect on the developments that are to come in medicine. We must realize that it may be the last voluntary organization within which we can function as a leader and direct some of these developments.

It's important that we don't just stand there—but do something. As James Baldwin has stated, "Not everything that is faced can be changed, but nothing can be changed until it is faced."

The following article by Doctor Heideman is written in response to the question appearing in the February issue: "How can physicians—especially young physicians—be encouraged to practice in the inner city or rural areas?"

Louis E. Heideman, MD
Birmingham

The real problem is "How can we provide adequate health services to rural areas and the inner city?" The provision of physicians is only part of the need and of the solution. The causes of the difficulties in recruitment are different, as are the solutions. There are at least three answers, but these are only temporary measures:

1—An assured high rate of pay will attract some competent young physicians who need a grub-stake to go on to what they really want. Some will find the situation rewarding and remain.

2—The undertaking of staffing of facilities by the established hospitals and medical schools as a regular part of their program and general service obligation.

3—The establishment of "circuit rider" programs with physicians coming to the area on a part time but regularly scheduled basis. Continuing care will be provided by other levels of health personnel who are in constant communication with a base. Rapid transportation must be available as needed.

These approaches are holding operations and can be implemented in either the rural setting or the ghetto.

Long range solutions require changes in our medical schools and changes in the pattern of provision of health services for both areas. There will have to be some modification of patient expectations in the rural areas and the assurance of reasonable safety for the health professionals in the inner city areas.

Students emulate their teachers. Little in our current educative process prepares our physicians for lone practice in rural areas. The demonstration of patterns of care and of standards of care which are completely unrelated to the circumstances extant away from the medical school and urban center, makes them unwilling, if not unable, to practice in relatively remote areas.

Campbell's Soups...
wide variety...for limited appetites

Many people lose interest in food as they grow older. Some of them are fussy eaters—with only a few favorite foods. Others become indifferent to foods—because planning and preparing meals becomes a chore. Here Campbell's Soups can help—for these four very good reasons:

Appeal With a variety of tastes, textures, aromas, and colors, Campbell's Soups can add interest and appetite appeal. And they're easy to eat—ingredients are tender, bite-size. Even patients on special diets will find soups they can enjoy among the more than 50 different varieties available.

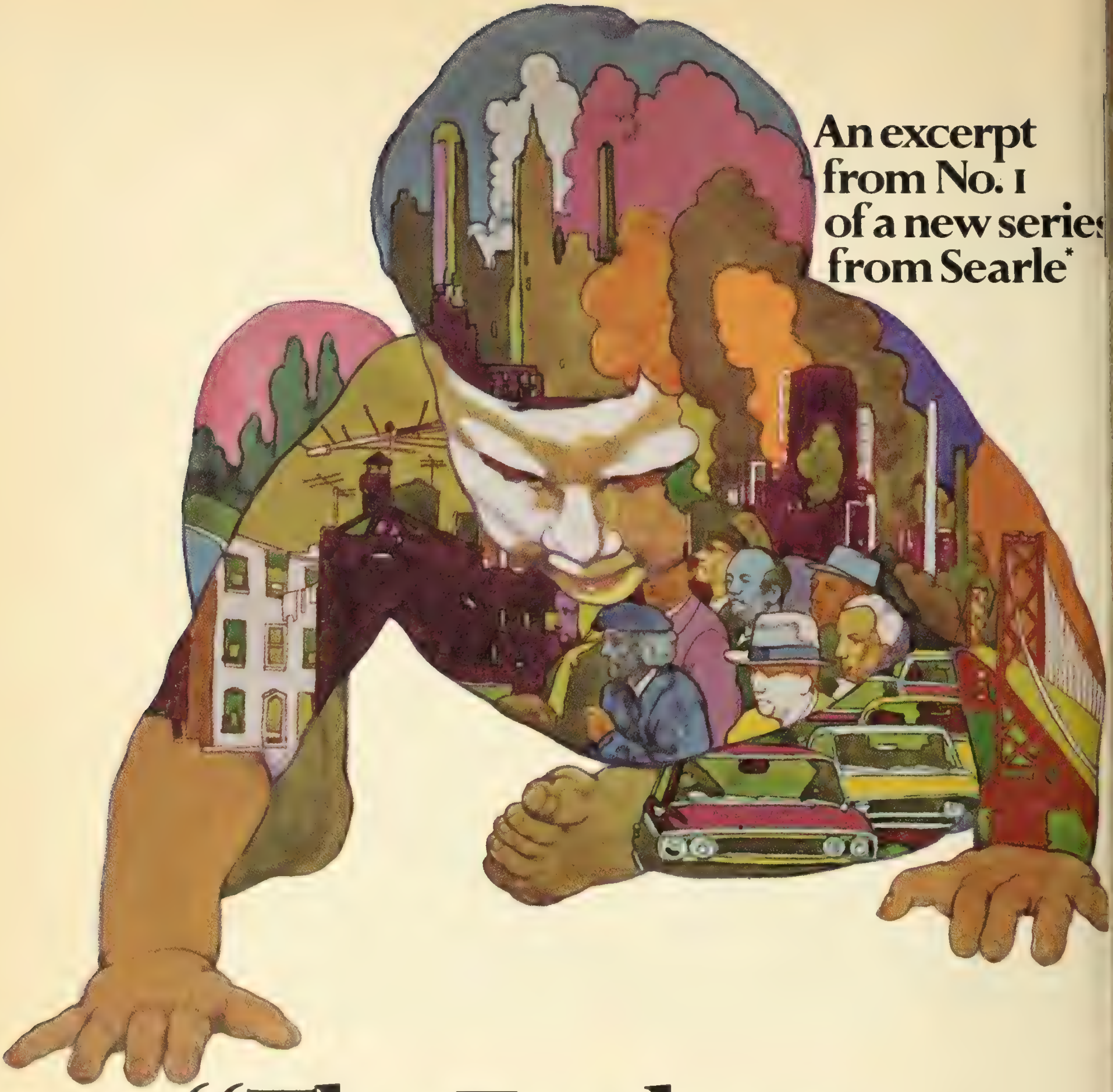
Campbell's
CONDENSED
SOUP

Nourishment Campbell's Soups contain selected meats and sea foods, best garden vegetables—carefully processed to help retain their natural flavors and nutritive values.

Convenience Within 4 minutes a bowl of delicious soup is heated and ready to eat.

Economy Campbell's Soups are inexpensive—an important consideration to those whose budgets are limited.

Recommend Campbell's Soups . . . and, of course, enjoy them yourself. Remember, *there's a soup for almost every patient and diet . . . and for every meal.*



An excerpt from No. 1 of a new serie from Searle*

"The Ecology of Birth Control"

75 million more Americans—what impact on health care?

Because of a declining birthrate in the United States—attributable in no small measure to the widespread use of contraceptives—our population in thirty years is expected to be *only* 280 million, while the world population is expected to double, reaching 7 billion.

But the word "only" has an ironic ring to ecologists who warn of cities resembling overcrowded, contaminated rat colonies, of respiratory and mental diseases reaching epidemic proportions and of a health-care community virtually overwhelmed by the burden.

The global consequences may be no less devastating. Ecologists estimate that every American has roughly fifty times the negative impact on the Earth's life-support systems of, say, a citizen of India. In these terms, adding 75 million Americans would be equivalent to adding 3.7 billion Indians to the world population.

**For the complete brochure, ar*
others in the series as they appe
please write to Searle or ask your Sear
representative. Explored in the fort
coming issues will be the role of bir
control on family pressures and i
effects on the family; the influences
poverty, ethnic factors and marit
status; its role in illness, its genet
implications and its effects on t
emotional and behavioral life of t
individual.

An original contribution to the science of contraception

Dem/ulen®

ach tablet contains 1 mg. ethynodiol diacetate/50 mcg. ethinyl estradiol

Demulen...for low estrogen and Searle's progestin...with ts unsurpassed contraceptive effectiveness and low incidence of side effects...with simple "Sunday-starting" and patient-proof Compack® tablet dispenser.

Actions—Demulen acts to prevent ovulation by inhibiting the output of goadotropins from the pituitary gland. Demulen depresses the output of both he follicle-stimulating hormone (FHS) and the luteinizing hormone (LH).

Special note: Oral contraceptives have been marketed in the United States ince 1960. Reported pregnancy rates vary from product to product. The efectiveness of the sequential products appears to be somewhat lower than that f the combination products. Both types provide almost completely effective ontraception.

An increased risk of thromboembolic disease associated with the use of ormonal contraceptives has now been shown in studies conducted in both reat Britain and the United States. Other risks, such as those of elevated lood pressure, liver disease and reduced tolerance to carbohydrates, have ot been quantitated with precision.

Long-term administration of both natural and synthetic estrogens in subrimate animal species in multiples of the human dose increases the frequency f some animal carcinomas. These data cannot be transposed directly to man. he possible carcinogenicity due to the estrogens can be neither affirmed nor efuted at this time. Close clinical surveillance of all women taking oral conraceptives must be continued.

Indication—Demulen is indicated for oral contraception.

Contraindications—Patients with thrombophlebitis, thromboembolic disorers, cerebral apoplexy or a past history of these conditions, markedly imaired liver function, known or suspected carcinoma of the breast, known or uspected estrogen-dependent neoplasia and undiagnosed abnormal genital leeding.

Warnings—The physician should be alert to the earliest manifestations of hrombotic disorders (thrombophlebitis, cerebrovascular disorders, pulmonary mbolism and retinal thrombosis). Should any of these occur or be suspected he drug should be discontinued immediately.

Retrospective studies of morbidity and mortality conducted in Great Britain nd studies of morbidity in the United States have shown a statistically sigificant association between thrombophlebitis, pulmonary embolism, and erebral thrombosis and embolism and the use of oral contraceptives. There ave been three principal studies in Britain [1-3] leading to this conclusion, and one[4] in this country. The estimate of the relative risk of thromboembolism in he study by Vessey and Doll[3] was about sevenfold, while Sartwell and assoiates[4] in the United States found a relative risk of 4.4, meaning that the users re several times as likely to undergo thromboembolic disease without evident ause as nonusers. The American study also indicated that the risk did not ersist after discontinuation of administration, and that it was not enhanced y long-continued administration. The American study was not designed to valuate a difference between products. However, the study suggested that here might be an increased risk of thromboembolic disease in users of seuential products. This risk cannot be quantitated, and further studies to conirm this finding are desirable.

Discontinue medication pending examination if there is sudden partial or omplete loss of vision, or if there is a sudden onset of proptosis, diplopia or migraine. If examination reveals papilledema or retinal vascular lesions mediation should be withdrawn.

Since the safety of Demulen in pregnancy has not been demonstrated, it is ecommended that for any patient who has missed two consecutive periods regnancy should be ruled out before continuing the contraceptive regimen. f the patient has not adhered to the prescribed schedule the possibility of regnancy should be considered at the time of the first missed period.

A small fraction of the hormonal agents in oral contraceptives has been dentified in the milk of mothers receiving these drugs. The long-range effect o the nursing infant cannot be determined at this time.

Precautions—The pretreatment and periodic physical examinations should nclude special reference to the breasts and pelvic organs, including Papanicolaou smear, since estrogens have been known to produce tumors, some of them malignant, in five species of subprimate animals. Endocrine and possibly liver function tests may be affected by treatment with Demulen. Therefore, if such tests are abnormal in a patient taking Demulen, it is recommended that they be repeated after the drug has been withdrawn for two months. Under the influence of progestogen-estrogen preparations preexisting uterine fibromyomas may increase in size. Because these agents may cause some degree of fluid retention, conditions which might be influenced by this factor, such as epilepsy, migraine, asthma, cardiac or renal dysfunction, require careful observation. In breakthrough bleeding, and in all cases of irregular bleeding per vaginam, nonfunctional causes should be borne in mind. In undiagnosed bleeding per vaginam adequate diagnostic measures are indicated. Patients with a history of psychic depression should be carefully observed and the drug discontinued if the depression recurs to a serious degree. Any possible influence of prolonged Demulen therapy on pituitary, ovarian, adrenal, hepatic or uterine function awaits further study. A decrease in glucose tolerance has been observed in a significant percentage of patients on oral contraceptives. The mechanism of this decrease is obscure. For this reason, diabetic patients should be carefully observed while receiving Demulen therapy. The age of the patient constitutes no absolute limiting factor, although treatment with Demulen may mask the onset of the climacteric. The pathologist should be advised of Demulen therapy when relevant specimens are submitted. Susceptible women may experience an increase in blood pressure following administration of contraceptive steroids.

Adverse reactions observed in patients receiving oral contraceptives—A statistically significant association has been demonstrated between use of oral contraceptives and the following serious adverse reactions: thrombophlebitis, pulmonary embolism and cerebral thrombosis.

Although available evidence is suggestive of an association, such a relationship has been neither confirmed nor refuted for the following serious adverse reactions: neuro-ocular lesions, e.g., retinal thrombosis and optic neuritis.

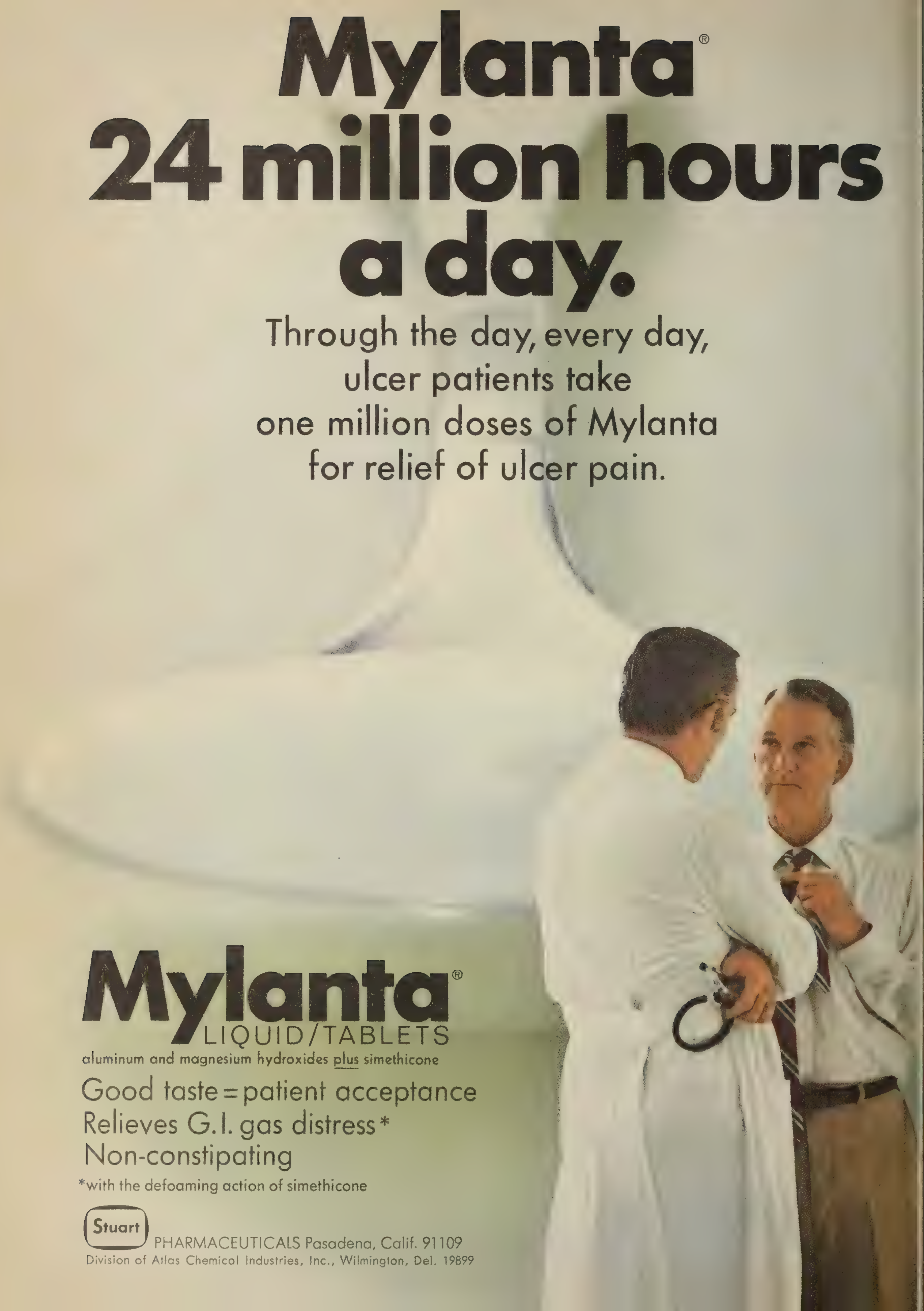
The following adverse reactions are known to occur in patients receiving oral contraceptives: nausea, vomiting, gastrointestinal symptoms (such as abdominal cramps and bloating), breakthrough bleeding, spotting, change in menstrual flow, amenorrhea during and after treatment, edema, chloasma or melasma, breast changes (tenderness, enlargement and secretion), change in weight (increase or decrease), changes in cervical erosion and cervical secretions, suppression of lactation when given immediately post partum, cholestatic jaundice, migraine, rash (allergic), rise in blood pressure in susceptible individuals and mental depression.

Although the following adverse reactions have been reported in users of oral contraceptives, an association has been neither confirmed nor refuted; anovulation post treatment, premenstrual-like syndrome, changes in libido, changes in appetite, cystitis-like syndrome, headache, nervousness, dizziness, fatigue, backache, hirsutism, loss of scalp hair, erythema multiforme, erythema nodosum, hemorrhagic eruption and itching.

The following laboratory results may be altered by the use of oral contraceptives: hepatic function: increased sulfobromophthalein retention and other tests; coagulation tests: increase in prothrombin, Factors VII, VIII, IX and X; thyroid function: increase in PBI and butanol extractable protein bound iodine, and decrease in T^3 uptake values; metyrapone test and pregnanediol determination.

References: 1. Royal College of General Practitioners: Oral Contraception and Thrombo-Embolic Disease, J. Coll. Gen. Pract. *13*:267-279 (May) 1967. **2.** Inman, W. H. W., and Vessey, M. P.: Investigation of Deaths from Pulmonary, Coronary, and Cerebral Thrombosis and Embolism in Women of Child-Bearing Age, Brit. Med. J. *2*:193-199 (April 27) 1968. **3.** Vessey, M. P., and Doll, R.: Investigation of Relation Between Use of Oral Contraceptives and Thromboembolic Disease. A Further Report, Brit. Med. J. *2*:651-657 (June 14) 1969. **4.** Sartwell, P. E.; Masi, A. T.; Arthes, F. G.; Greene, G. R., and Smith, H. E.: Thromboembolism and Oral Contraceptives: An Epidemiologic Case-Control Study, Amer. J. Epidem. *90*:365-380 (Nov.) 1969. 1A2

SEARLE Where "The Pill" Began
G. D. Searle & Co., P.O. Box 5110, Chicago, Illinois 60680



Mylanta®
24 million hours a day.

Through the day, every day,
ulcer patients take
one million doses of Mylanta
for relief of ulcer pain.

Mylanta®
LIQUID/TABLETS
aluminum and magnesium hydroxides plus simethicone

Good taste = patient acceptance
Relieves G.I. gas distress*
Non-constipating

*with the defoaming action of simethicone

Stuart
PHARMACEUTICALS Pasadena, Calif. 91109
Division of Atlas Chemical Industries, Inc., Wilmington, Del. 19899

Professional ideals

A report of the Judicial Commission adopted by the House of Delegates, Dec. 1, 1970

Recently many letters have been received by the Judicial Council complaining of an apparent preoccupation by an increasing number of physicians with the financial aspects of their medical practice.

The Judicial Council reaffirms that the laborer is worthy of his hire and the physician is entitled to reasonable compensation for the service he performs. At the same time, the Council must point out that the "prime object of the medical profession is to serve humanity; reward or financial gain is a subordinate consideration."

In 1934 the House of Delegates said "one of the strongest holds of the profession on public approbation and support has been the age-old professional ideal of medical service to all, whether able to pay or not." The Council believes it would be helpful if the House were to reaffirm that policy at this meeting.

Some physicians seem to believe that the practices of business enterprises should be utilized by physicians in order to "encourage prompt attention to medical accounts." They ask, "Why shouldn't we be paid as soon as the dry goods store, the grocer, or the TV service man?"

Ideally, the physician should be paid promptly. If the physician is not paid as promptly as other creditors he should recall that he is a professional man with all the perquisites that that term implies. Our patients in large number carry insurance to cover the cost of medical services. (They do not insure payment of the cost of other professional or business services to any notable extent.) Governmental programs have been instituted and are being developed continually to provide payment for medical care to those who are unable to provide this payment.

If the profession were to cast aside its ideals and traditions and adopt the practices of business, trade or industry in dealing with patients, then the profession would be casting aside also the perquisites that have been accorded it. The increase of collections by adding 1½% interest per month to a bill of an honest patient embarrassed because of inflationary trends, or the bill of some retired person living on a small pension is, in the opinion of the Judicial Council, not justifiable. It simply is not worth it from any point of view. The imposition of a penalty on the bill of a "deadbeat" is not likely to cause him suddenly to change; the chances are he will become even less likely to pay.

A physician who demands a satisfactory credit report on an individual before accepting that individual as a patient is demonstrating that to him financial compensation is the prime object and reward of his profession.

A physician who publicly refuses to see a patient, who had an appointment, because patient's balance on account was "too high" is demonstrating that he respects neither himself nor his profession.

These examples are real. The Council believes they are the exception and they seem more conspicuous because of that fact. Nonetheless, these practices reflect adversely on the whole profession and especially on the countless physicians who extend credit willingly or write off old accounts because they are dedicated to serving mankind.

The Judicial Council therefore recommends that the House of Delegates reaffirm that the prime object of the medical profession is to render service to humanity; financial gain is a subordinate consideration.

The Council recommends that the House call this reaffirmation of policy to the attention of constituent and component medical societies, asking them to urge all physicians to adhere faithfully to the professional ideals, traditions and goals of American medicine.

Michigan Mediscene

March 4—MSMS Population Control Workshop for county society leaders, all day, MSMS Headquarters, contact: Miss Helen Schulte, MSMS Headquarters.

March 6—Michigan Academy of Plastic Surgeons annual spring meeting, 10 a.m. to 3 p.m., MSMS Headquarters, contact: Kenneth Dorner, MD, 220 Bronson Medical Center, Kalamazoo 49006

(Continued on Page 224)

When irritable colon feels like this

The blowfish, a small speci
of fish, reacts to stress or
fright by puffing itself up w
air. After about a dozen
noisy gulps the belly is ballo
shaped and hard. When
replaced in the water the a
quickly expelled, and
the fish sinks to the bottom

...in the presence of spasm or hypermotility, gas distension and discomfort, **KINESED**® provides more complete relief:

☐ **belladonna alkaloids—for the hyperactive bowel** ☐ **simethicone—for accompanying distension and pain due to gas** ☐ **phenobarbital—for associated anxiety and tension**

Composition: Each chewable, fruit-flavored, scored tablet contains: 16 mg. phenobarbital (warning: may be habit-forming); 0.1 mg. hyoscyamine sulfate; 0.02 mg. atropine sulfate; 0.007 mg. scopolamine hydrobromide; 40 mg. simethicone.

Contraindications: Hypersensitivity to barbiturates or belladonna alkaloids, glaucoma, advanced renal or hepatic disease.

Precautions: Administer with caution to patients with incipient glaucoma, bladder neck obstruction or urinary bladder atony. Prolonged use of barbiturates may be habit-forming.

Side effects: Blurred vision, dry mouth, dysuria, and other atropine-like side effects may occur at high doses, but are only rarely noted at recommended dosages.

Dosage: Adults: One or two tablets three or four times daily. Dosage can be adjusted depending on diagnosis and severity of symptoms. Children 2 to 12 years: One half or one tablet three or four times daily. Tablets may be chewed or swallowed with liquids.

STUART PHARMACEUTICALS | Pasadena, California 91109 | Division of ATLAS CHEMICAL INDUSTRIES, INC.

(from the Greek **kinetikos**,
to move,
and the Latin **sedatus**,
to calm)

KINESED®

antispasmodic/sedative/antiflatulent

March 7—Michigan Society of Internal Medicine, board meeting, 11 a.m., MSMS Headquarters, contact: Jack Kantner, 1419 Harvard, East Lansing 48823

March 10—MSMS Council, 9:30 a.m., MSMS Headquarters, East Lansing, contact: Warren F. Tryloff, MSMS director.

March 12—MARMP Regional Advisory Group, 1:30 p.m., MSMS Headquarters, contact: Albert E. Heustis, MD, Michigan Association for Regional Medical Programs, 1111 E. Michigan Ave., East Lansing 48823

March 17—Annual spring clinical meeting, Michigan Diabetes Association, Sinai Hospital, Detroit, contact: Annette Lippman, Michigan Diabetes Association, 6131 W. Outer Drive, Detroit 48235

March 21—Michigan State Medical Assistants Society, board meeting, noon, MSMS Headquarters, contact: Mrs. Jackie Van Deventer, MSMS Headquarters

March 23—Fourth Annual Legislative Day, Woman's Auxiliary to MSMS, all-day, Olds Plaza Hotel, Lansing, contact: Mrs. Eli Igna, 584 Lakeland, Grosse Pointe 48236

April 14-15—10th Annual Michigan Conference on Maternal and Perinatal Welfare, Olds Plaza Hotel, Lansing, contact: Miss Helen Schulte, MSMS Headquarters.

April 18-21—Michigan Dental Association, annual meeting, Statler Hilton Hotel, Detroit, contact: Marc W. Brown, executive assistant, MDA, 430 Stoddard Bldg, Lansing 48933

April 19-21—Clinical Pharmacology with Emphasis on Newer Drugs, American College of Physicians, University of Michigan Medical School, Ann Arbor, contact: Edward A. Carr, MD, director

April 21—Michigan Allergy Society, 5:30 p.m., Mercy College of Detroit Student Union Building, 8200 Outer Drive, contact: John Lesesne, MD, president, MAS, 17770 Mack Ave., Grosse Pointe 48224

April 21—Michigan League for Nursing, annual conference, Hospitality Inn, Lansing, contact: Mrs. Marguerite Murray, RN, executive director, MLN, Room 314, 41 W. Warren Ave., Detroit 48201

April 21—MSMS Council, 9:30 a.m., MSMS Headquarters, East Lansing, contact: Warren F. Tryloff, MSMS director

April 22—Sixth Annual MSMS Conference on Medical Aspects of High School Sports, Kellogg Center, MSU, East Lansing, contact: James Feurig, MD, Olin Health Center, MSU, East Lansing 48823

April 27-28—Spring Mental Health Meeting, sponsored by Michigan Society for Mental Health, MSU College of Human Medicine, Department of Psychiatry and Continuing Education Service, at Kellogg Center, MSU; contact: Harold Drain, PhD, Department of Psychiatry, MSU, East Lansing 48823

April 28-29—Annual Meeting, Michigan Dietetic Association, Grand Rapids, contact: Mrs. Shirley O'Connell, Visiting Nurse Association, 4421 Woodward Ave., Detroit 48201

April 28-29—Spring Conference of the Woman's Auxiliary to MSMS, Sheraton Motor Inn, Pontiac, contact: Mrs. F. P. Rhoades, 272 Ashland Ave., Detroit 48215

April 29-May 1—Annual Scientific Sessions and Heart Days, Michigan Heart Association, Cobo Hall and the Pontchartrain Hotel, Detroit, contact: David Ballinger, MHA director of field services, 13100 Puritan, Detroit 48227

April 30-May 2—Annual meeting, Michigan State Medical Assistants Society, Weber's Motor Inn, Ann Arbor

May 12—Wayne State University School of Medicine Alumni Clinic Day, Sheraton-Cadillac Hotel, Detroit, theme: "Environmental health, with emphasis on the medical aspects of the ecology," contact: Alan J. Hitsky, Information Services, Wayne State University, Detroit 48202

May 19—Michigan Allergy Society Annual Meeting, Ann Arbor, contact: John Lesesne, MD, president, MAS, 1770 Mack Ave., Grosse Pointe 48224

May 19-21—Michigan Public Health Association annual meeting, Pantlind Hotel, Grand Rapids, contact: William Swanson, executive director, Michigan Public Health Association, 403 Seymour, Lansing 48914

May 20-21—Annual summer meeting of MSMS Maternal and Perinatal Health Committee, Kellogg Biological Station, Gull Lake, contact: Miss Helen Schulte, MSMS Headquarters

May 21-23—Michigan Kidney Foundation annual and educational meeting, Kellogg Center, East Lansing, contact: Martin Jones, MD, 2909 E. Grand River, Lansing

May 22—16th annual all-day scientific session, Michigan Society of Anesthesiologists, Sheraton-Cadillac, Detroit, contact: Ralph E. Bauer, MD, secretary-treasurer, MSA, Henry Ford Hospital, Detroit 48202

May 22-23—Michigan Society of Medical Technologists, annual and educational meeting, Kellogg Center, East Lansing, contact: Robert Brooks, School of Medical Technology, MSU, East Lansing 48823

May 24-28—Clinical Endocrinology: Physiological Basis for Current Diagnostic and Therapeutic Procedures, American College of Physicians, U-M Medical Center, Ann Arbor, contact: Jerome W. Conn, MD, course director.

May 26—MSMS Council, 9:30 a.m., MSMS Headquarters, East Lansing, contact: Warren F. Tryloff, MSMS director

May 26-28—Medical Staff-Trustee-Administrator Forum, Boyne Mountain Lodge, contact: Allan Barth, executive director, Michigan Hospital Association, 2213 E. Grand River, Lansing 48912

June 16—MSMS Council, noon to 5 p.m., MSMS Headquarters, East Lansing, contact; Warren F. Tryloff, MSMS director

June 20-24—Many Michigan physicians will attend the AMA Convention in Atlantic City

July 30—Annual midsummer meeting of the MSMS Council, Boyne Highlands, contact: Warren F. Tryloff, MSMS director

Oct. 3 and 6—MSMS Council, Pantlind Hotel, Grand Rapids

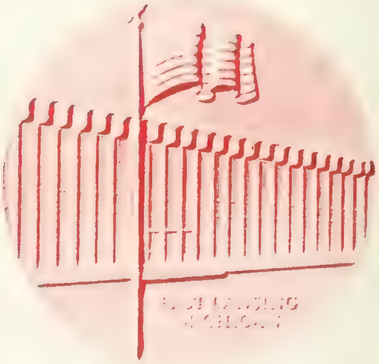
Oct. 3-7—1971 MSMS Annual Session, Pantlind Hotel, Grand Rapids

Oct. 5-7—1971 Annual Convention of the Woman's Auxiliary to MSMS, Pantlind Hotel, Grand Rapids

Nov. 10—MSMS Council, MSMS Headquarters, East Lansing, noon to 5 p.m., contact: Warren F. Tryloff, MSMS director

Nov. 28-Dec. 1—AMA Clinical Convention, New Orleans

Dec. 8—MSMS Council, MSMS Headquarters, East Lansing, 9:30 a.m., contact: Warren F. Tryloff, MSMS director.



Fast...long-lasting relief of aches and pains of colds and flu

with the unique timed-release aspirin

Double strength Measurin timed-release aspirin offers a new kind of control for your patients with cold and flu discomforts. In each 10-grain tablet are over 6,000 microscopic reservoirs that release aspirin at a controlled rate—some right away and some later on. This means fast relief of symptoms, followed by hours of comfort. Throughout the day, Measurin gives your patients freedom from a 4-hour aspirin schedule. During the night, its 8-hour dosage schedule holds the promise of sound sleep without awakening to take extra tablets.

For Professional Samples write:
Breon Laboratories Inc.
Sample Fulfillment Division
P.O. Box 141
Fairview, N.J. 07022

BREON **BREON LABORATORIES INC.**
90 Park Avenue, New York, N.Y. 10016
Subsidiary of Sterling Drug Inc.

MEASURIN®
TIMED-RELEASE ASPIRIN
ECONOMICAL • EFFECTIVE • LONG LASTING PAIN RELIEF
Dosage: 2 tablets followed by 1 or 2 tablets every 8 hours as required, not to exceed 6 tablets in 24 hours. For maximum nighttime pain relief, 2 tablets at bedtime.
Available: Bottles of 12, 36 and 60 tablets.

Medical care programs

A timely review of proposed health care bills

By Herbert Mehler, Staff Assistant
MSMS Committee on
Government-Medical Care Programs

National health insurance will receive concentrated attention during the First Session of the 92nd Congress. MSMS is studying these proposals as they affect patient care and the practicing physician.

Here are the major provisions of the health care bills to be considered.

Proposed by: The Nixon Administration (no name)

Provisions: Family health insurance for the poor and near-poor, replace Medicaid and provides preventive, hospital, and surgical care.

Full Federal financing and nationwide eligibility standards.

Catastrophic insurance covering all persons. Pays hospital bills after 30-60 days' care and 80% of medical bills over $2,000.

Estimated Cost: $2.3 billion a year from Social Security funds.

* * *

Proposed by: American Hospital Association — **Ameriplan**

Provisions: Creates 400 HMO-like health-care corporations nationally each to deliver comprehensive health care in a given area. Eliminates Medicaid and Medicare.

Federal Funds would pay premiums for the poor and the aged.

Non-poor would buy own coverage. Consumers would help decide scope and evaluate quality of care.

Estimated Cost: Not available.

* * *

Proposed by: Health Insurance Association of America — **Healthcare**

Provisions: Extends private health-insurance framework to all Americans.

Provides complete medical care, including dental care for children under 19 and prescription drugs.

State and Federal governments would pay premiums for the poor and near-poor.

Individuals and employers would buy private coverage.

Federal standards for insurance plans would assure nationwide uniformity.

Employers with sub-standard plans would lose one-half tax deductions for premiums until plans met standards.

Estimated cost: $3.2 billion the first year.

* * *

Proposed by: Senator Edward Kennedy and Representative Martha Griffiths — **Human Security**

Provisions: Emphasizes group practice and comprehensive care.

Eliminates Medicare, Medicaid and private coverage.

President to name a five-member Health Security Board to administer through HEW's ten regions and 100 sub-regions.

Comprehensive, total care with few limits on services to everyone.

Consumers would comprise majority on local health-care-policy boards.

Financed by a 3.5% tax on employers' payrolls and 1% levy on individuals income up to $15,000; Federal funds would pay the rest.

Estimated cost: $53 billion — author's estimate
$77 billion — HEW'S estimate

* * *

Proposed by: Senator Russell Long — **Catastrophic Illness**

(Note: This bill was approved by the Senate Finance Committee in 1970).

Provisions: Protects 95% of all Americans — those under 65 who are covered by Social Security against catastrophic illness.

Pays for hospital bills after the first 60 days of care and for 80% of an individuals medical bills exceeding $2,000.

Estimated Cost: $2.2 billion, financed by extra Social Security taxes.

(Continued on Page 228)

BRIGHTON HOSPITAL

A non-profit foundation

FOR ALCOHOLISM

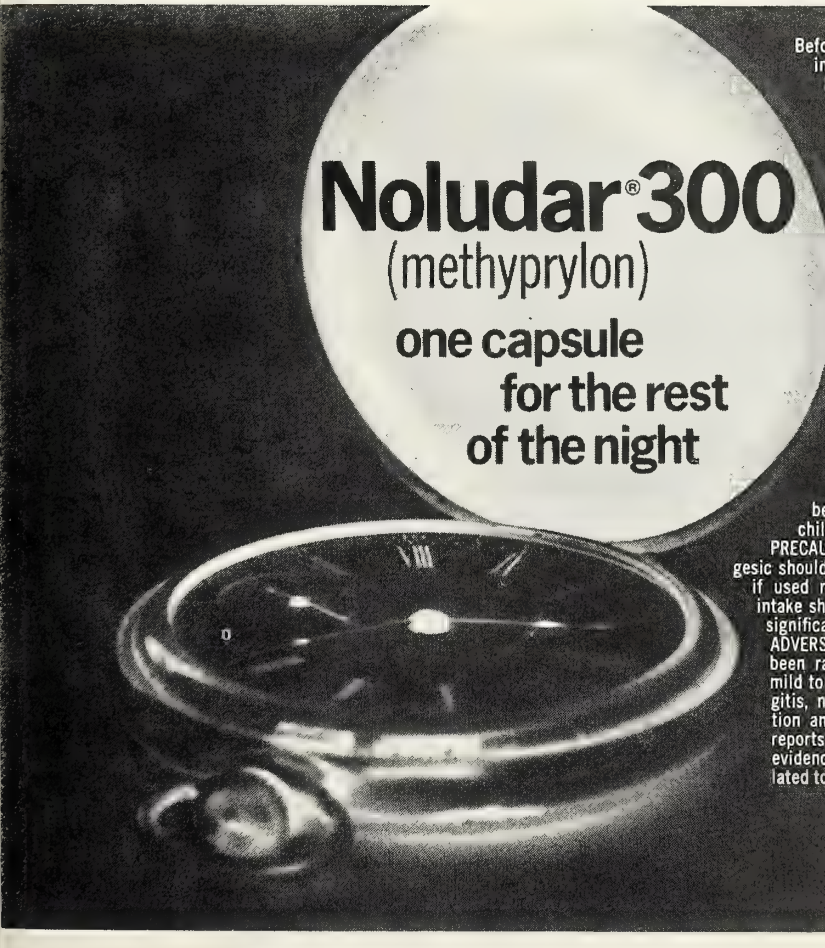
Member, Michigan Hospital Association, American Hospital Association

A facility designed to rehabilitate and aid the compulsive drinker in arresting his addiction.

Brighton Hospital meets the standards established by the Michigan State Board of Alcoholism and is recommended by that Board.

12851 East Grand River
One block south of I-96 at Kensington Rd. Exit
four miles east of U.S. 23
Brighton, Michigan
ACademy 7-1211

(A 16-m.m. sound color film on Brighton Hospital is available for free loan to qualified groups.)



Noludar® 300
(methyprylon)
one capsule
for the rest
of the night

Before prescribing, please consult complete product information, a summary of which follows:

INDICATION: Relief of insomnia of varied etiology.

CONTRAINDICATIONS: Patients with known hypersensitivity to the drug.

WARNINGS: Caution patients about combined effects with alcohol and other CNS depressants. Caution against hazardous occupations requiring complete mental alertness, such as operating machinery or driving a motor vehicle shortly after ingesting the drug.

Physical and Psychological Dependence: Physical and psychological dependence rarely reported. If withdrawal symptoms do occur they may resemble those associated with withdrawal of barbiturates and should be treated in the same fashion. Use caution in administering to individuals known to be addiction-prone or those whose history suggests they may increase the dosage on their own initiative. Repeat prescriptions should be under adequate medical supervision.

Usage in Pregnancy: Weigh potential benefits in pregnancy, during lactation, or in women of childbearing age against possible hazards to mother and child.

PRECAUTIONS: If sleeplessness is pain-related, an analgesic should also be prescribed. Perform periodic blood counts if used repeatedly or over prolonged periods. Total daily intake should not exceed 400 mg, as greater amounts do not significantly increase hypnotic benefits.

ADVERSE REACTIONS: At recommended dosages, there have been rare occurrences of morning drowsiness, dizziness, mild to moderate gastric upset (including diarrhea, esophagitis, nausea and vomiting), headache, paradoxical excitation and skin rash. There have been a very few isolated reports of neutropenia and thrombocytopenia; however, the evidence does not establish that these reactions are related to the drug.

ROCHE **Roche**
LABORATORIES
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

Proposed by: The American Medical Association —**Medicredit**

Provisions: Permits individuals to choose their own health coverage by giving tax credits to buy insurance.

Credits would be scaled to income with the Federal government buying insurance for families paying less than $300 Federal Income Tax a year.

System of delivery care would not change. Extent and quality of care delivered, including doctors' fees, governed by peer-review procedures set up by local and county medical societies.

Estimated cost: $16 billion annually.

* * *

Proposed by: Carnegie Commission on Medical Education recommendation and sponsored by Senator Clairborne Pell—**Minimum Health Benefits.**

Provisions: Creates federally chartered regional health corporations whose stock would be owned by doctors, hospitals, insurers, and other providers of care.

Blends HMO's, Ameriplan and area health education centers.

Comprehensive, pre-paid care emphasizing preventive and ambulatory services.

Would educate own medical manpower.

Permits issuance of tax-exempt bonds to build facilities.

Salaried physicians.

Eliminates fee-for-service.

Educational and medical-care-functions financed by a combination of individual, Federal and employer group-insurance payments.

Estimated Cost: None available.

* * *

Proposed by: Senator Jacob K. Javits — **Optional Extended Medicare**

Provisions: Extends Medicare benefits to all Americans under 65 who choose it.

Permits purchase of other private insurance. In stages, would offer complete medical service to everyone, including some free medicine and dental care for children under 8.

Emphasizes comprehensive care through prepaid groups, HMO type plans and private insurance plans.

Federal government pays premiums for poor. All others would pay through payroll taxes on individuals and employers.

Estimated Cost: $66.4 billion a year when fully implemented.

(The preceding legislation, likely to be proposed, may be modified or amended. Future issues of MICHIGAN MEDICINE will note any subsequent changes.)

(Source: THE NATIONAL OBSERVER, January 25, 1971)

Brief Summary of Prescribing Information– 9-9/22/69. For complete information consult Official Package Circular.
Indications: Essential hypertension. Use cautiously in patients with renal insufficiency, particularly if they are digitalized.
Contraindications: Anuria, oliguria, active peptic ulceration, ulcerative colitis, severe depression or hypersensitivity to its components contraindicates the use of Salutensin.
Warnings: Small-bowel lesions (obstruction, hemorrhage, perforation and death) have occurred during therapy with enteric-coated formulations containing potassium, with or without thiazides. Such potassium formulations should be used with Salutensin only when indicated and should be discontinued immediately if abdominal pain, distension, nausea, vomiting or gastrointestinal bleeding occurs. Use cautiously, and only when deemed essential, in fertile, pregnant or lactating patients. *Use in Pregnancy:* Thiazides cross the placenta and can cause fetal or neonatal hyperbilirubinemia, thrombocytopenia, altered carbohydrate metabolism and possibly electrolyte disturbances. Fatal reactions may occur with reserpine during electroshock therapy; discontinue Salutensin 2 weeks before such therapy. Increased respiratory secretions, nasal congestion, cyanosis and anorexia may occur in infants born to reserpine-treated mothers.
Precautions: Azotemia, hypochloremia, hyponatremia, hypochloremic alkalosis and hypokaliemia (especially with hepatic cirrhosis and corticosteroid therapy) may occur, particularly with pre-existing vomiting and diarrhea. Potassium loss or protoveratrine A may cause digitalis intoxication. *Potassium loss responds to potassium-rich foods, potassium chloride or, if necessary, discontinuation of therapy. Stop therapy if protoveratrine A induces digitalis intoxication.* Serum ammonia elevation may precipitate coma in precomatose hepatic cirrhotics. Discontinue therapy 2 weeks before surgery or if myocardial irritability, progressive azotemia or severe depression occur. Exercise caution in patients with chronic uremia, angina pectoris, coronary thrombosis or extensive cerebral vascular disease *or bronchial asthma* and in those with a history of peptic ulceration or bronchial asthma; in post-sympathectomy patients; in patients on quinidine; and in patients with gallstones, in whom biliary colic may occur. Patients who have diabetes mellitus or who are suspected of being prediabetic should be kept under close observation if treated with this agent.
Adverse Reactions: Hydroflumethiazide: Skin rashes (including exfoliative dermatitis), skin photosensitivity, urticaria, necrotizing angiitis, xanthopsia, granulocytopenia, aplastic anemia, orthostatic hypotension (potentiated with alcohol, barbiturates or narcotics), allergic glomerulonephritis, acute pancreatitis, liver involvement (intrahepatic cholestatic jaundice), purpura plus or minus thrombocytopenia, hyperuricemia, hyperglycemia, glycosuria, malaise, weakness, dizziness, fatigue, paresthesias, muscle cramps, skin rash, epigastric distress, vomiting, diarrhea and constipation. *Reserpine:* Depression, peptic ulceration, diarrhea, Parkinsonism, nasal stuffiness, dryness of the mouth, weight gain, impotence or decreased libido, conjunctival injection, dull sensorium, deafness, glaucoma, uveitis, optic atrophy, and, with overdosage, agitation, insomnia and nightmares. *Protoveratrine A:* Nausea, vomiting, cardiac arrhythmia, prostration, blurring vision, mental confusion, excessive hypotension and bradycardia. (Treat bradycardia with atropine and hypotension with vasopressors.)
Usual Dose: 1 tablet b.i.d.
Supplied: Bottles of 60, 600, and 1000 scored 50 mg. tablets.

Salutensin®

hydroflumethiazide, 50 mg./reserpine, 0.125 mg. protoveratrine A, 0.2 mg.

BRISTOL

BRISTOL LABORATORIES
Division of Bristol-Myers Company
Syracuse, New York 13201

The antihypertensive therapy that is easy to live with.*

When successive blood pressure readings confirm essential hypertension, consider Salutensin for:

Easy-to-live-with control. Gradual reduction of blood pressure leading to decisive, comfortable control is the common clinical response.

*Salutensin is usually well-tolerated (however, serious side effects can occur; see adjacent column for brief summary of prescribing information).

Easy-to-live with dosage. Two tablets a day usually achieves control. One to two tablets a day often maintains control without need for additional antihypertensive agents.

Easy-to-live with cost of therapy. The one to two tablets a day maintenance dose makes Salutensin economical to stay with. Important, because long-term control calls for long-term therapy.

Salutensin®

hydroflumethiazide, 50 mg./reserpine, 0.125 mg. protoveratrine A, 0.2 mg.

CONSTIPATION
EVACUATE GENTLY

With EVAC-U-GEN — your patients with functional constipation can evacuate gently. Because EVAC-U-GEN has a mild laxative action and tends to cause the stool to be soft — it is highly desirable for those sensitive to harsh laxatives — particularly children, pregnant women, and geriatric patients. Recommend EVAC-U-GEN for the management of functional constipation. It is highly effective. Non-griping. Chewable. Very palatable. Economical.

EVAC-U-GEN®

A highly-flavored and palatable tablet of yellow phenolphthalein, bismuth subcarbonate, bismuth subgallate in special base. Chewable. Bottles of 35 and 100. Adult Dose: Chew 1 or 2 tablets night or morning. Children (up to age 10): ½ tablet. A citrus drink taken with tablet will stimulate action.
PRECAUTION: Do not use when symptoms of appendicitis are present and discontinue use if skin rash appears. Dependence on laxatives can result from continued use.

W-C PRECISION PHARMACEUTICALS

SEND FOR SAMPLES.
WALKER, CORP & CO., INC.
Syracuse, New York 13201

Viewpoints

What is your local society?

By J. R. Quinn, MD
Bloomfield Hills

There are various reasons why we maintain our membership in our local society. Many of us continue from year to year through force of habit; others continue because they feel it necessary in order to practice in the vicinity. Others have a more positive relationship because they have an understanding of the purposes and the functions of this group of physicians. The question is often asked, "What does the county society do for me?"; and this is a legitimate query. Because many of our members may have forgotten what the Society does and can do, we will try to reiterate some important features of this organization and its activities.

Your county medical society represents you — it is an avenue of direct communication between its members and the citizens of your county — enabling physicians to know each other better and to know the entire medical community.

The Society can serve as a forum for sharing of ideas and problems — but you must make yourself heard through attendance at general meetings, serving on committees and through *The Bulletin.* If you have a positive contribution, a complaint or a gripe, SPEAK OUT.

Our county society serves as a medium to help coordinate medical resources and endeavors to assist the public with its questions concerning medical care. Every day calls are made to county headquarters. The callers may ask the names of physicians for themselves or their families; they may wish to voice a complaint about medical care or lack of it; they may wish to ask about some current medical question or research. An attempt is made to handle all these calls in a polite, helpful and diplomatic manner.

The most important task of the local medical society is to serve as a standard keeper for ethical

---

(Doctor Quinn is president of the Oakland County Medical Society. His article is reprinted here with permission, from the OCMS Bulletin of January.)

medical care and relations. For a professional society to maintain moral control over its members, and physicians in the area who are not present members, there must be an official group charged with setting guide lines and rules for approved medical behavior.

The County Medical Society, through its numerous committees, tries to maintain a broad contact with the physicians, consumers, government agencies and paramedical and voluntary organizations.

Doctors can be recruiters for paramedicals

By Mrs. R. F. Proud
State Chairman, Health Careers
Woman's Auxiliary to MSMS

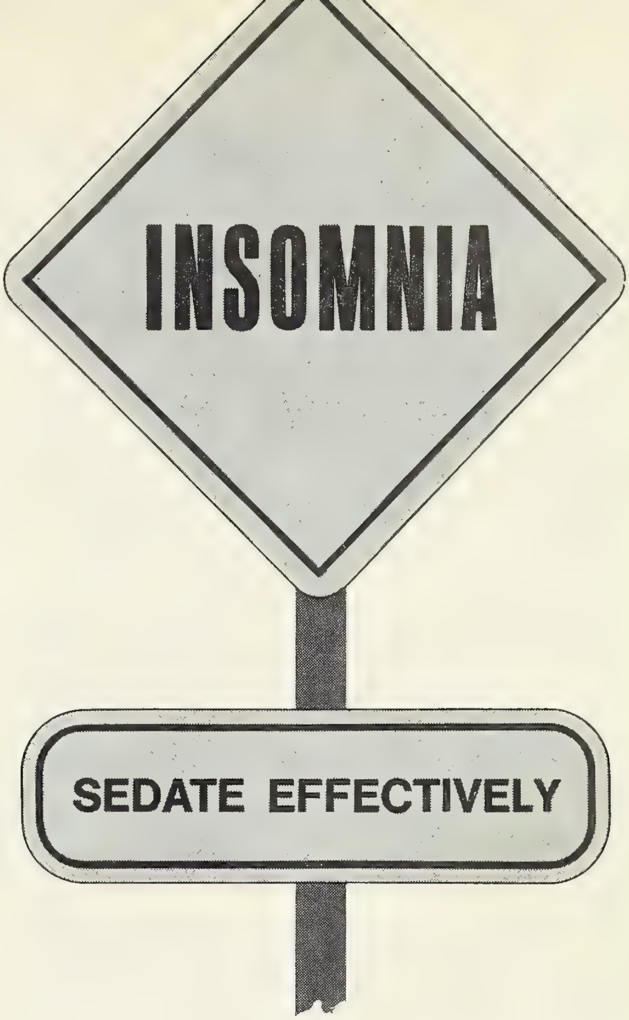
In the 1970's the problem of rapidly advancing technology, combined with the lagging production of technologists is common to all professions. Medicine has in a special way helped to create this Medusa of our twentieth century. On the one hand, medical technology has made staggering advances, while on the other, the medical wizards who created these advances have done little to supply the people to apply the new knowledge.

More than anyone else, the doctor must recruit the paraprofessionals who will become the back-up "practitioners" in the 250 varieties of health service fields presently in existence. By 1975 it has been projected that ten (10) percent of all graduating high school seniors will be needed to meet the demands of the medical paraprofessional market alone.

The present is an opportune time to do such recruiting. As the market for other service oriented professionals, notably teachers, becomes satisfied, a number of young people are casting about in a search for careers that are humanitarian and at the same time satisfying. The problem is that more often than not they will not come to you for direction in this regard. But you do see them — and you see them every day!

Schools all have counselling offices where well-intentioned but not always well-informed people advise and direct young people toward careers. Too few are aware of paramedical fields. These same schools may even have a Future Nurses Club or a

(Continued on Page 232)



With QUĪ-A-ZONE — you can sedate effectively. A balanced combination of short, intermediate, and long-acting barbiturates (totaling 100 mg.) in a rapidly disintegrating tablet — sedation is provided within a few minutes . . . followed by sound restful sleep . . . usually without morning hangover. The four barbiturates in QUĪ-A-ZONE have dual channels of elimination (renal and hepatic) to lessen metabolic burden, decrease barbiturate retention, and minimize depression.

QUĪ-A-ZONE™

Each rapidly-disintegrating tablet contains 25 mg. secobarbital, 25 mg. pentobarbital, 25 mg. butabarbital, and 25 mg. phenobarbital. Bottles of 100.
Usual Adult Dose: 1 to 2 tablets before retiring.
PRECAUTION: Should not be administered to patients sensitive to barbiturates, or in cases of known previous addiction. Warning: May be habit forming.

W-C PRECISION PHARMACEUTICALS

SEND FOR SAMPLES.

WALKER, CORP & CO., INC.
Syracuse, New York 13201

"Candy Striping" program and sometimes the participation in such a group may run as high as three or four percent of the student body. With a little luck and a lot of work such a program may produce a few nurses. But what about the other 249 health service specialists

You will find your assistants, your helpers, your "practitioners" in your waiting rooms and on your hospital rounds. They are the high school football player with the twisted knee, the kid whose appendix you removed, the young man who dislocated his shoulder while storing a rug on the garage rafters, the young girl recuperating from "mono," and the list goes on. The remarkable and fortuitous circumstance is that they and you are at the same place simultaneously!

When does one think of health more than when surrounded by the sick or when ill himself? When will a person see more of the trappings of the medical world than in a doctor's office, a clinic, or a hospital? The advantages present in such places cannot possibly be equalled in a high school gym on "Career Night." So take advantage of *your* opportunity!

You begin your recruiting by taking time to personalize your service to potential paramedicals. You do not prescribe the same medicines for all diseases, neither can you apply the same bedside manner to all your patients. Spend a few extra minutes explaining procedures, lab work and treatment; the young, impressionable, altruistic patients will welcome your interest and might surprise you with their willingness to receive an invitation to become a paramedical. But the absolute necessity for successful recruiting is your personal interest, your involvement and your enthusiasm!

It is up to you to prevent the blessing of advancing technology from becoming a curse. Don't wait until your labs, your pharmacies and your X-ray departments are hopelessly understaffed to begin recruiting. Why not start tomorrow?

WAYNE STATE
CLINIC
DAY

WEDNESDAY, MAY 12, 1971
SHERATON-CADILLAC HOTEL
DETROIT

THEME: ENVIRONMENTAL HEALTH
with emphasis on the medical aspects of pollution.

featuring
leading authors
public figures
and physicians

and
a sneak preview tour
of the $24-million
WSU Basic Medical Science Building
in the Detroit Medical Center.

New Members

Members of the Michigan State Medical Society join in welcoming the following new members into a progressive state medical organization. MSMS is dedicated to promoting the science and art of medicine, the protection of the public health, and the betterment of the medical profession. Each new member is encouraged to join with other MSMS members at both the local and the state levels in achieving these goals.

James C. Askins, MD, 214 N. West Ave., Jackson, 49201

Daniel R. Barr, MD, 1025 David Whitney Bldg., Detroit 48226

Kenneth J. Betten, MD, 216 Bronson Medical Center, Kalamazoo 49006

Francis P. Bhagat, MD, 861 Monroe, Dearborn 48124

Antonio Boba, MD, 1400 Chrysler Expressway, Detroit 48207

Santiago C. Caberto, MD, 685 W. Riverside Dr., Ionia 48846

Juan C. Carioni, MD, William Beaumont Hosp., Royal Oak 48072

Ray H. Clark, MD, 500 Lansing, Jackson 49201

Russell T. Costello, MD, 645 Riverside Drive, Benton Harbor 49022

Enrique D. Covani, MD, Pontiac General Hosp., Pontiac 48053

Phillip J. Dommisse, MD, 922 35th St., S. W., Grand Rapids 49509

Lionel R. Dorfman, MD, 309 Mich. Nat'l Bank Bldg., Battle Creek 49014

Frank S. DuPont, MD, Detroit Memorial Hospital, Detroit 48226

David S. Dyke, MD, Health Center, WMU, Kalamazoo 49001

Stuart Fisher, MD, Detroit General Hospital, Deroit 48226

Robert Goldberger, MD, Pontiac General Hospital, Pontiac 48053

Rose Marie B. Gustilo, MD, Pontiac State Hospital, Pontiac 48053

Glenn R. Groustra, MD, 22 I Tower Plaza, 555 E. Williams, Ann Arbor 48108

Abdul A. Hassan, MD, Children's Hospital, Detroit 48202

Frederic L. Hock, MD, 7696 Kresge Building, Ann Arbor 48104

Teodorico S. Ira, MD, 935 John Street, Kalamazoo 49001

Stepas Jodelis, MD, 661 W. Riverside Drive, Ionia 48846

G. Reza Karimipour, MD, 35 S. Johnson St., Pontiac 48053

Donald R. Kay, MD, Upjohn Center, Univ. of Michigan, Ann Arbor 48104

Demetrios Kikas, MD, 1800 Tuxedo, Detroit 48206

Soo Sup Lah, MD, St. Joseph Mercy Hosp., Pontiac 48053

Freddy G. Lim, MD, 1310 Greenwood, Jackson 49203

David I. Lipschutz, MD, 17000 West Eight Mile Rd., Southfield 48075

Aquiles G. Lira, MD, Radiology Dept., Pawating Hosp., Niles 49120

Federico Mariona, MD, 1554 Tuxedo, Detroit 48206

E. M. McGowan, MD, 910 Eastlawn Drive, Midland 48640

Henry P. Mendoza, MD, Pontiac General Hosp., Pontiac 48053

Frank J. Newman, MD, 405 Bronson Medical Center, Kalamazoo 49006

D. A. Patel, MD, William Beaumont Hosp., Royal Oak 48072

Vimal P. Puri, MD, 1151 Taylor, Detroit 48202

Phillip O. Richards, MD, 214 N. West Ave., Jackson 49201

James A. Rising, MD, 432 E. Hancock, Detroit 48201

Richard A. Rood, MD, 7900 Joseph Campau, Detroit 48212

Raul R. Santos, MD, Northville State Hosp., Northville 48167

Richard A. Small, MD, William Beaumont Hosp., Royal Oak 48072

Phillip B. Stott, MD, 102 Borgess Medical Center, Kalamazoo 49001

Virgilio Vasquez, MD, 932 Fenwood Circle, North Muskegon 49445

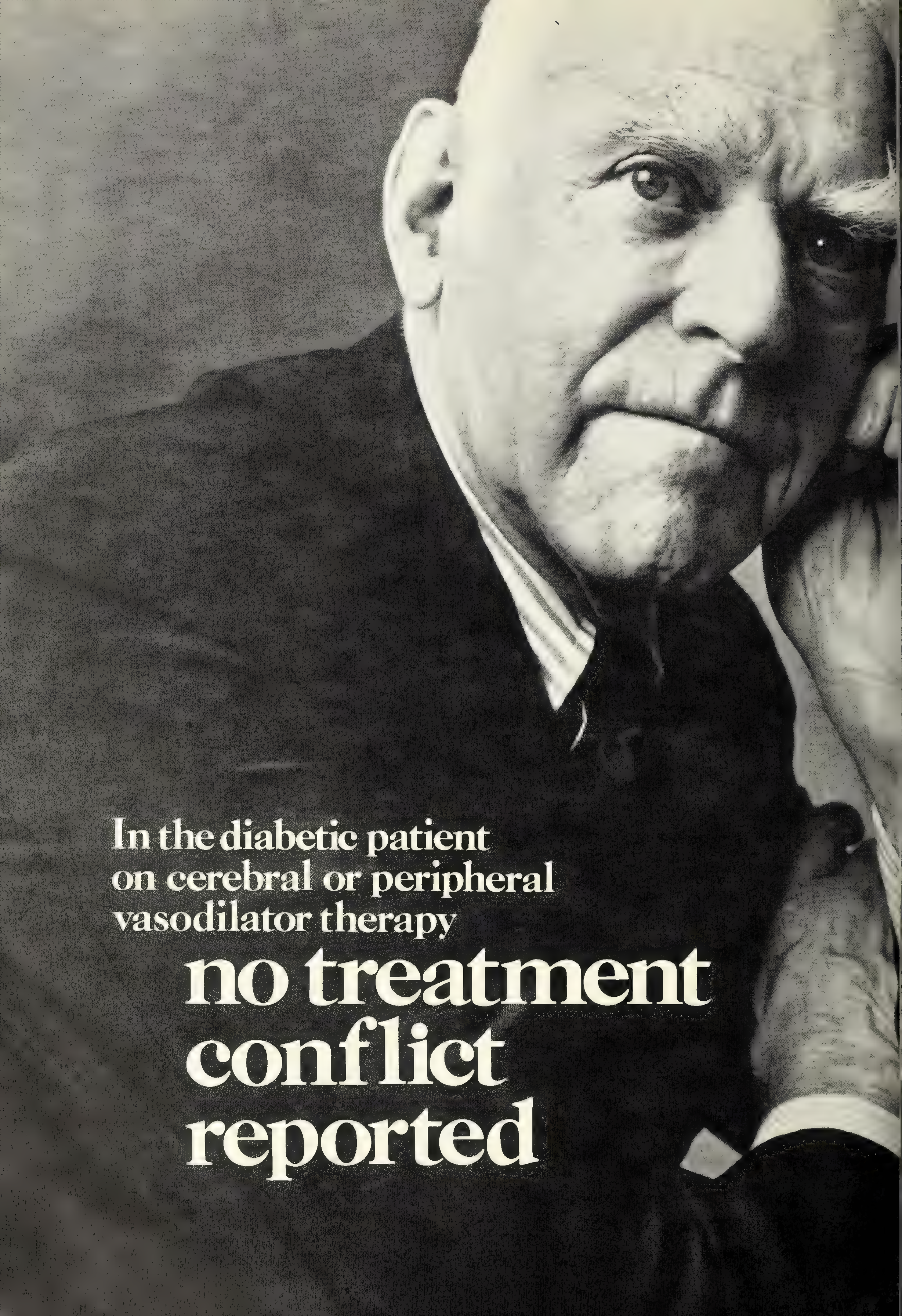
Jimmie J. VerLee, MD, Pontiac General Hospital, Pontiac 48053

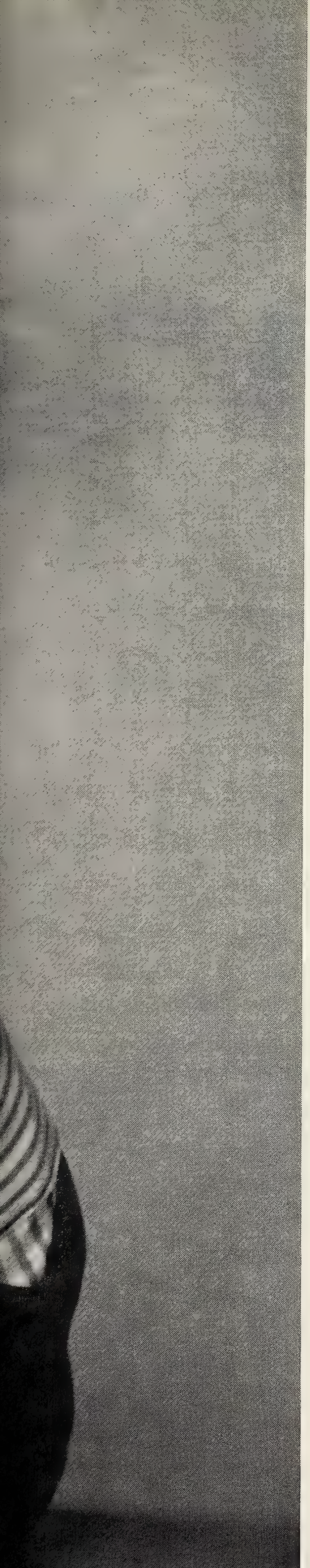
Frederick B. Watt, Jr., MD, Harper Hospital, Detroit 48201

Wayne L. Wertz, MD, 2522 Niles Ave., St. Joseph 49085

Henry O. Wick, Jr., DO, Sparrow Hospital, Lansing 48902

Leonard H. Wolin, MD, 2216 Medford Rd., Ann Arbor 48104


In the diabetic patient
on cerebral or peripheral
vasodilator therapy
no treatment
conflict
reported



VASODĪLAN®

(ISOXSUPRINE HCl)

the compatible vasodilator

- no interference with diabetic control ...does not alter carbohydrate metabolism.[1]
- conflicts have not been reported with diuretics, corticosteroids, antihypertensives or miotics.
- complications in the treatment of coronary insufficiency, hypertension, peptic ulcer, glaucoma and liver disease have not been reported.

In fact, there are no known contraindications in recommended oral doses other than it should not be given in the presence of frank arterial bleeding or immediately postpartum.

Although not all clinicians agree on the value of vasodilators in vascular disease, several investigators[2-5] have reported favorably on the effects of isoxsuprine. Effects have been demonstrated both by objective measurement[3,5] and observation of clinical improvement.[2,4] **Indications:** Cerebrovascular insufficiency, arteriosclerosis obliterans, diabetic vascular diseases, thromboangiitis obliterans (Buerger's disease), Raynaud's disease, postphlebitic conditions, acroparesthesia, frostbite syndrome and ulcers of the extremities (arteriosclerotic, diabetic, thrombotic). **Composition:** VASODĪLAN tablets, isoxsuprine HCl 10 mg, and 20 mg. **Dosage:** Oral—10 to 20 mg. t.i.d. or q.i.d. **Contraindications and Cautions:** There are no known contraindications to recommended oral dosage. Do not give immediately postpartum or in the presence of arterial bleeding. **Side Effects:** Occasional palpitation and dizziness can usually be controlled by dosage reduction. Complete details available in product brochure from Mead Johnson Laboratories. **References:** (1) Samuels, S. S., and Shaftel, H. E.: J. Indiana Med. Ass. *54*:1021-1023 (July) 1961. (2) Clarkson, I. S., and LePere, D. M.: Angiology *11*:190-192 (June) 1960. (3) Horton, G. E., and Johnson, P. C., Jr.: Angiology *15*:70-74 (Feb.) 1964. (4) Dhrymiotis, A. D., and Whittier, J. R.: Curr. Ther. Res. *4*:124-128 (April) 1962. (5) Whittier, J. R.: Angiology *15*:82-87 (Feb.) 1964.

MeadJohnson
LABORATORIES

© 1971 MEAD JOHNSON & COMPANY • EVANSVILLE, INDIANA 47721 U.S.A. 184071

MHC Placement Service helps locate 1,007 doctors in Michigan in 17 years

By John A. Doherty
Director
Michigan Health Council

Beginning its 18th year of operation, the M.D. Placement Service of the Michigan Health Council has been responsible in part for the placement of 1,007 doctors of medicine in Michigan. In recent years placements have averaged approximately 55. In the period from January 1, 1970 to December 31, 1970, 73 M.D.s were placed.

The list of communities needing doctors is ever increasing. There now are 174 openings in Michigan communities for at least one family physician, and 90 communities are searching for medical specialists. There are 7 opportunities listed for industrial medical physicians, 8 pharmaceutical openings and 9 vacancies for public health officers. Several communities in need of doctors have developed special brochures under the guidance of, or in cooperation with, the Michigan Health Council. These publications have been distributed to physicians registered with the Placement Service.

In cooperation with the Michigan Tourist Council, a full-page advertisement was placed in the Student AMA Journal, *New Physician*. Response was very good, and the ad was repeated in the publication. We also arranged to have the advertisement placed in *Physician's Management*, a publication that reaches family physicians throughout the United States. The magazine has run the advertisement on numerous occasions as a public service to doctors and the Council. The ad also has been placed in all of the magazine's specialty publications. More than 300 replies have been received as a result of this national campaign. The first doctor to locate in Michigan as a result of this program is in general practice in Sturgis. An advertisement was run recently in the *Army Times* in an effort to attract physicians about to leave medical military service.

Consumers Power Company, because of its interest in the economic development of rural Michigan and its recognition of the need for an adequate number of doctors, has taken a keen interest in assisting the Michigan Health Council in promoting Michigan as a place to practice medicine. The Company developed an outstanding brochure that describes the vast opportunities for family doctors. Copies are available in quantity to Michigan physicians who are interested in sending the brochure to medical students, interns and residents along with a personal message inviting them to come to Michigan.

The Upjohn Company of Kalamazoo has continued its much-appreciated financial support of the Council's Placement Service — which is rated by doctors using it as the most helpful in the Nation.

The Dentist Placement Service also continues to grow, and the number of opportunities for dentists throughout the State has tripled in recent years.

HPI

HOSPITAL PLANNING INC.
ALCO UNIVERSAL BUILDING
EAST LANSING, MICH. 48823

Physicians Clinics Groups Hospitals

We serve the hospital and medical field by recruitment of professional personnel for client organizations who need capable general practitioners and medical specialists. As management and personnel consultants we are familiar with the leading clinics and hospitals as well as the best of the smaller medical groups in the Great Lakes Region.

Placements include physicians just completing training as well as men who have been in practice for some time but desire a change in geography or wish to join a group or clinic.

Physicians of all disciplines are needed now. Mail your resume including desired objectives in confidence to Art Lepinot. No financial obligation to the physician.

Telephone (517) 332-1333

About doctors

Dr. Friedlaender

Doctor Friedlaender heads national allergy society

The new president of the American Association for Clinical Immunology and Allergy is Alex Sidney Friedlaender, MD, Southfield. Doctor Friedlaender, a graduate of Wayne State University School of Medicine, is chief of allergy service at Grace Hospital, Detroit, and adjunct assistant professor of medicine at WSU.

Doctor Friedlaender is a former president of the Michigan Allergy Society and is a fellow of both the American Academy of Allergy and the American College of Allergists.

Doctor Hermann, formerly of Michigan, receives high AMA award

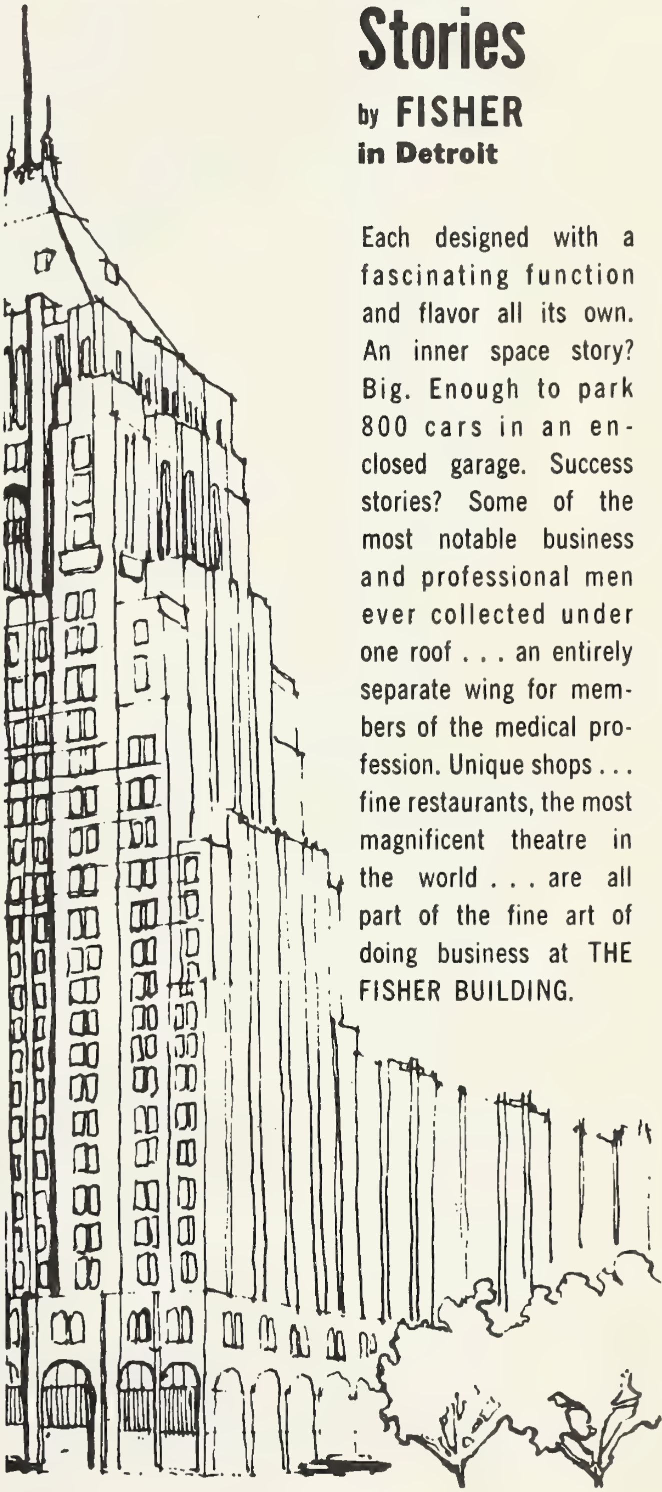
Former Michigan physician George R. Hermann, MD, Galveston, Tex., is the recipient of the AMA's Distinguished Service Award. Doctor Hermann is now medical writer, emeritus professor and researcher in arteriosclerosis, thrombosis and coronary artery disease at the University of Texas Medical Branch.

He is a graduate of the University of Michigan Medical School and served as a research assistant from 1921-25 under Frank N. Wilson, MD, then distinguished U-M cardiologist. Doctor Hermann's nomination for the award was enthusiastically supported by the Michigan delegation to the AMA's Clinical Convention recently in Boston.

New Battle Creek facility named in honor of Doctor Jeffrey

The Battle Creek Sanitarium Hospital has a new building, formally dedicated Dec. 11 to James R. Jeffrey, MD, medical director, and named The Jeffrey Building. At the dedication Doctor Jeffrey

(Continued on Page 238)



28 Tall Stories

by FISHER
in Detroit

Each designed with a fascinating function and flavor all its own. An inner space story? Big. Enough to park 800 cars in an enclosed garage. Success stories? Some of the most notable business and professional men ever collected under one roof . . . an entirely separate wing for members of the medical profession. Unique shops . . . fine restaurants, the most magnificent theatre in the world . . . are all part of the fine art of doing business at THE FISHER BUILDING.

Call or write the Rental Office
THE FISHER BUILDING
Across from the General Motors Bldg.
Detroit, Mich. 48202 (313)874-4444

was cited for being the one "whose wisdom and experience match his kindness and understanding: The 'San's' beloved physician."

Herbert E. Sloan, Jr., MD, Ann Arbor,
is new head of the thoracic surgery section at the University of Michigan Medical Center. He will be in charge of the U-M heart and lung transplant program there. Doctor Sloan is also acting chief of thoracic surgery at the Veterans Administration Hospital at Ann Arbor and head of thoracic surgery at Wayne County General Hospital. He succeeds Donald R. Kahn, MD, who will leave Ann Arbor for a similar position at the University of Wisconsin.

Alfred H. Sokolowski, MD, Detroit,
is one of the few Michigan physicians active in politics. Doctor Sokolowski is serving a term on the Wayne State University Board of Governors and will hold that position until Dec. 31, 1974.

Albert J. Silverman, MD, Ann Arbor,
has received four recent appointments to national professional organizations. Doctor Silverman has been named chairman of the research and training committee of the American Association of Chairmen of Departments of Psychiatry; has received a four-year appointment as a member of the research scientists development committee of the National Institute of Mental Health; has been named to the Council on Medical Education and Career Development of the American Psychiatric Association, and is a member of the mental research committee of the American Academy of Psychoanalysis. Doctor Silverman is chairman of the U-M Department of Psychiatry.

Milton L. Sorock, MD, Franklin
received an engraved bronze medal at the 18th annual meeting of Sinai Hospital, Detroit, recently, for his "distinguished service to the hospital and the community." Doctor Sorock served as Sinai's chief of surgery from 1959-70.

Eight Grand Rapids-area physicians
were awarded certificates at the January 12 annual meeting of the Kent County Medical Society for their service to the society and the practice of medicine. They are Ruth Herrick, MD; Aleksandrs Kalnis, MD; Cornetta G. Moen, MD; Arthur M. Moll, MD; Arthur H. Mollmann, MD; E. Sugg, MD; John Ten Have, MD and Athol B. Thompson, MD.

Established 1924

MERCYWOOD HOSPITAL

4038 Jackson Road — Conducted by Sisters of Mercy — Ann Arbor, Michigan

Telephone — 313 663-8571

Mercywood Hospital is a private neuropsychiatric hospital licensed by the Michigan Department of Mental Health. Mercywood specializes in intensive, multi-disciplinary treatment for emotional and mental disorders.

Accredited by the Joint Commission on Accreditation of Hospitals and the National League of Nursing. A full Blue Cross participating hospital.

Certified for: Medicare and M.A.A. programs

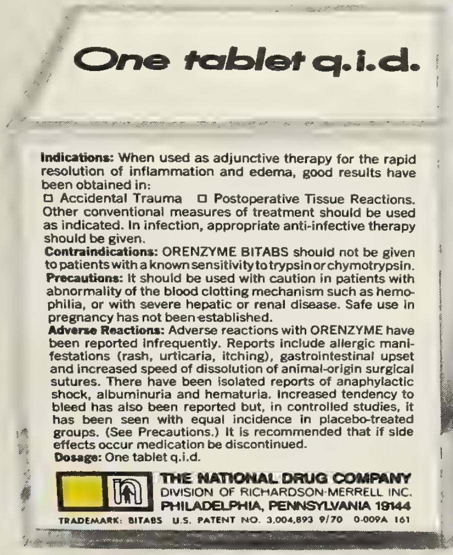
PSYCHIATRIC STAFF

Lyle M. Allis, M.D.
Robert J. Bahra, M.D.
Dean P. Carron, M.D.
Francis M. Daignault, M.D.
Gordon C. Dieterich, M.D.
James R. Driver, M.D.
Robert L. Fransway, M.D.
Stuart M. Gould, Jr., M.D.
Leonard E. Himler, M.D.*
Sydney Joseph, M.D.
Hubert Miller, M.D.
Jacob J. Miller, M.D.
Rudolf Nobel, M.D.
Gerard M. Schmit, M.D.
Richard D. Watkins, M.D.

*1904-1967

A
BUILDING BLOCK
TO RECOVERY

"Welcome back, Ann"
As adjunctive therapy
DOUBLE STRENGTH
Orenzyme®
Bitabs One tablet q.i.d.
Trypsin: 100,000 N.F. Units, Chymotrypsin: 8,000 N.F. Units; equivalent in tryptic activity to 40 mg. of N.F. trypsin
Reduces swelling
Hastens healing
Speeds recovery
trauma


One tablet q.i.d.

Indications: When used as adjunctive therapy for the rapid resolution of inflammation and edema, good results have been obtained in:
☐ Accidental Trauma ☐ Postoperative Tissue Reactions.
Other conventional measures of treatment should be used as indicated. In infection, appropriate anti-infective therapy should be given.
Contraindications: ORENZYME BITABS should not be given to patients with a known sensitivity to trypsin or chymotrypsin.
Precautions: It should be used with caution in patients with abnormality of the blood clotting mechanism such as hemophilia, or with severe hepatic or renal disease. Safe use in pregnancy has not been established.
Adverse Reactions: Adverse reactions with ORENZYME have been reported infrequently. Reports include allergic manifestations (rash, urticaria, itching), gastrointestinal upset and increased speed of dissolution of animal-origin surgical sutures. There have been isolated reports of anaphylactic shock, albuminuria and hematuria. Increased tendency to bleed has also been reported but, in controlled studies, it has been seen with equal incidence in placebo-treated groups. (See Precautions.) It is recommended that if side effects occur medication be discontinued.
Dosage: One tablet q.i.d.

THE NATIONAL DRUG COMPANY
DIVISION OF RICHARDSON-MERRELL INC.
PHILADELPHIA, PENNSYLVANIA 19144
TRADEMARK: BITABS U.S. PATENT NO. 3,004,893 9/70 0-009A 161

Orenzyme® Bitabs

Trypsin: 100,000 N.F. Units, Chymotrypsin: 8,000 N.F. Units; equivalent in tryptic activity to 40 mg. of N.F. trypsin

The causes of vaginitis are multiple

Trichomonads . . . monilia . . . bacteria

You can depend on AVC—comprehensive therapy that combats all three major vaginal pathogens, alone or in combination.

AVC

Cream (aminacrine hydrochloride 0.2%, sulfanilamide 15.0%, allantoin 2.0%)

Suppositories (aminacrine hydrochloride 0.014 Gm., sulfanilamide 1.05 Gm., allantoin 0.14 Gm.)

Contraindications: Known sensitivity to sulfonamides.

Precautions/Adverse Reactions: The usual precautions for topical and systemic sulfonamides should be observed because of the possibility of absorption. Burning, increased local discomfort, skin rash, urticaria or other manifestations of sulfonamide toxicity are reasons to discontinue treatment.

Dosage: One applicatorful or one suppository intravaginally once or twice daily.

Supplied: Cream—Four-ounce tube with or without applicator. Suppositories—Box of 12 with applicator.

TRADEMARK: AVC AV-104 2/71 Y-149

THE NATIONAL DRUG COMPANY
DIVISION OF RICHARDSON-MERRELL INC
PHILADELPHIA, PENNSYLVANIA 19144

AVC

The treatment is singular

Radio paging service now two years old in Muskegon County

The new radio paging and telephone answering service of the Muskegon County Medical Society has been in use now for two years, making "a tremendous improvement in the availability of local doctors," according to William Vangelder, MD.

"It works out well," says Doctor Vangelder, chairman of the MCMS committee in charge of the services. "Our doctors are now more free to come and go, knowing they can be contacted wherever they are."

The telephone answering service works like any other.

The radio paging service comes in two forms—one a two-way system used by about 20 of the Muskegon doctors who are able to talk back to those giving the messages, and the second a one-way, "beep, push-a-button, hear-a-message" system used by the bulk of the Muskegon Society's 112 members.

"The doctors can take their radios in their cars, in schools, on the golf course, in church, in the theater," says Doctor Vangelder enthusiastically.

The Muskegon doctors have made another innovation in their paging system. They have installed a transmitter at local Hackley Hospital on the same frequency as the radio service. The Hackley transmitter is used just for in-hospital paging of the doctors, "cutting down the noise in the hospital that is so annoying to the patients," according to Doctor Vangelder.

The doctors' own radio paging service was Doctor Vangelder's idea two years ago after a similar commercial service offered in Muskegon for 15 years proved to be too cluttered with use by businesses and local services.

Doctor Vangelder was made principal licensee and the other 111 Muskegon doctors co-licensees. With the cooperation of the local bank, the doctors placed their transmitter on the top of the bank building, the highest point in the town.

A professional group controls the telephone answering and radio paging services remotely, with the medical society paying a monthly fee. Another professional organization maintains the equipment.

Approximately 80% of the medical society members use the radio paging service, and all pay for both the radio and telephone services through their dues. The doctors can be reached by their radios throughout the county.

Kalamazoo doctors develop health center

President of the Kalamazoo Academy of Medicine, Roger R. Scholten, MD, calls the most significant development in the Kalamazoo medical community during the past year the proposed Neighborhood Health Center to be located in the heart of the Northside Kalamazoo community.

The entire February meeting of the Academy was devoted to the project, with a description by Albert L. Pisani, MD, director of his highly successful health care center in the Chicago inner city. The Rev. B. Moses James and Vice Mayor Gilbert Bradley of Kalamazoo were also on the panel.

The center was recommended at the November 1970 Academy meeting by an Ad Hoc committee organized following a Community Services Council of Kalamazoo County report in November of 1969. The report disclosed the results of a survey of the health, welfare and recreation needs and resources in the county. Medical care was classified second in importance to the community and medical care third in priority for community attention.

Following the November meeting, several concerned physicians, together with leaders of the Kalamazoo establishment and the Northside community, obtained the backing of essential groups.

Berrien physicians begin primary care

Berrien County physicians are taking part in the establishment of a primary medical care center in the Benton Harbor area. First steps in the organization of the center have been the setup of general and prenatal clinics.

Clinton Wilson, MD, Benton Harbor general practitioner and coordinator of out-patient clinics, explains that the object is to provide medical service to those people who are acutely ill or need

(Continued on Page 244)

Announcing the calculated success

Euthroid® (liotrix) puts your patient here*:

*in the euthyroid zone
of the new Free
Thyroxine Index** w
full replacement dos

ithroid (liotrix) yields reliable, easily interpreted test values

ause Euthroid incorporates both active fractions of endogenous thyroid—T_4 and T_3—it rcomes the need for special interpretation of thyroid function test values.

reover, whatever the therapy used, ordinary tests can be thrown off by such factors as iormal thyroid-binding protein levels, oral contraceptive use and pregnancy. A new hod of assessment—the Free Thyroxine Index (FTI)**—helps eliminate these errors. By iting measurements of total and protein-bound T_4, the FTI indicates your patient's status cisely. And with Euthroid, the precision of your diagnosis is matched by the precision our therapy.

To request your
Euthroidex™ calculator
(with booklet explaining
its use and rationale
for the FTI), just write
"Euthroidex" on your
imprinted card, pre-
scription blank or
stationery, and
mail to
Warner-Chilcott,
Morris Plains,
N.J. 07950.

osest in clinical effect to human endogenous thyroid

hroid provides both T_4 and T_3 in the optimum *oral* ratio of 4:1 by weight and in proper g amounts, closely simulating endogenous thyroid in clinical effect. Dose response can assessed unequivocally through use of the FTI—and because we want you to put Euthroid he test *with this most rigorous of tests,* we offer you an aid to easier determination:

e Euthroidex™ calculator—
r the "new math" of thyroid laboratory tests

longer does FTI determination require you to perform lengthy mathematical exercises. h the Euthroidex calculator—another first from Warner-Chilcott—you compute it easily ccurately... almost instantly. Send for yours now.

yroid therapy, Euthroid offers you the calculated success—and the calculator to go with it.

the first synthetic to replace both active fractions of endogenous thyroid

Euthroid® (liotrix)

sodium levothyroxine (T_4)
sodium liothyronine (T_3)

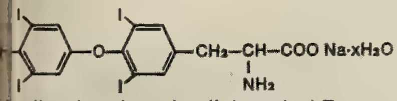
k, F., and Horn, D. B.: Assessment of thyroid function by combined use of the serum protein-bound iodine and resin uptake of -triiodothyronine, J. Clin. Endocrinol. 25:39 (Jan.) 1965.

---

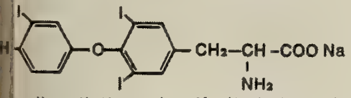
hroid® (liotrix)

tion: Federal law prohibits dispensing hout prescription.

hroid is synthetic microcrystalline sodium othyroxine (T_4) USP and synthetic micro-stalline sodium liothyronine (T_3) USP combed in a constant 4:1 ratio.



sodium levothyroxine (*l*-thyroxine) T_4



sodium liothyronine (*l*-triiodothyronine) T_3

ions: Euthroid provides replacement ther- for the thyroactive material normally plied by the human thyroid. The normal roid gland produces and stores thyro-bulin, the active components of which are metabolically active hormones: *l*-thyine and liothyronine. Euthroid (liotrix) proes a combination of these hormones in ified, synthetic form, supplied in a connt 4:1 ratio in order to simulate as closely possible the physiologic and metabolic ects of normal endogenous thyroid secrens.

n contrast with the individual synthetic, tabolically active hormones, Euthroid will ually produce normal results for PBI, T_3, other thyroid function tests—consistent h clinical progress—when persons with dogenous thyroid deficiencies are made hyroid. Sodium liothyronine (T_3) acts more idly and for a shorter period of time than parations of biological origin. Customly, its use as a single agent produces in-propriately decreased PBI values. Sodium othyroxine (T_4), on the other hand, is more htly bound by plasma protein fractions and somewhat slower acting than sodium thyronine (T_3); its use as a single agent ds to produce inappropriately elevated values. Euthroid, with its unvarying 4:1 io of T_4/T_3, permits interpretation of appriate laboratory tests consistent with the al clinical status of the patient.

ications: Euthroid (liotrix) provides thyroid lacement therapy in all conditions of inequate production of thyroid hormones, namely:

1) Hypothyroidism, including cretinism and myxedema.
2) Simple (nontoxic) goiter.
3) Subacute or chronic thyroiditis including Hashimoto's disease.
4) Prevention of goiter in hyperthyroid patients undergoing treatment with thiouracil derivatives.
5) Usage in patients who may manifest intolerance to thyroid products of animal origin.

Contraindications: Acute myocardial infarction, adrenal insufficiency, hypersensitivity to any component of this drug.

Warnings: Liotrix should not be used in the presence of cardiovascular disease unless thyroid replacement therapy is clearly indicated. If the latter exists, low doses should be instituted (Euthroid-1/2 or Euthroid-1) and increased by the same amount in increments at 2-week intervals. This demands careful clinical judgment.

Morphologic hypogonadism and nephroses should be ruled out and adrenal deficiency due to hypopituitarism corrected before liotrix therapy is started.

If hypothyroidism and adrenal insufficiency exist concomitantly, cortisone or similar steroids should be given at dose levels sufficient to correct the adrenal insufficiency before attempting replacement therapy with thyroid hormones.

Likewise, the possibility of alterations in the prothrombin time must be considered and closely monitored in patients on anticoagulant therapy.

Myxedematous patients are very sensitive to thyroid hormones, and dosage should be started at a very low level and increased gradually.

Precautions: Hypothyroid patients are especially sensitive to thyroid preparations, and those with severe hypothyroidism may be unusually so.

Initiation of thyroid replacement therapy in patients with diabetes must be carefully monitored because of potential fluctuation in daily insulin or oral hypoglycemic requirements.

As with all thyroid preparations, this drug will alter the results of thyroid function tests.

Adverse Reactions: Overdosage or too rapid increase in dosage of thyroid preparations can produce signs and symptoms of hyperthyroidism, such as menstrual irregularities, nervousness, cardiac arrhythmias, and angina pectoris.

Dosage and Administration: Initial dosage should be low and gradually increased at 2-week intervals until the desired clinical response is obtained.

Laboratory criteria of euthyroidism include a PBI of 3.5 to 8 mcg; T_3, T_4, and BEI tests are useful.

For most patients, a single daily dose of Euthroid-1, -2, or -3 will maintain euthyroidism. Transfer of a patient from a maintenance dose of another thyroid preparation to Euthroid can usually be effected smoothly. See table for initiating therapy or converting from other thyroid preparations.

Euthroid (liotrix)		**Approximate Equivalents** **Natural**	**Synthetic**	
Tablet	T_4*/T_3** mcg	Thyroid USP	T_4*	T_3**
Euthroid-½ pale orange	(30/7.5)	½ grain	.05 mg	12.5 mcg
Euthroid-1 light brown	(60/15)	1 grain	.1 mg	25.0 mcg
Euthroid-2 violet	(120/30)	2 grains	.2 mg	50.0 mcg
Euthroid-3 gray	(180/45)	3 grains	.3 mg	75.0 mcg

*T_4=sodium levothyroxine (*l*-thyroxine)

**T_3=sodium liothyronine (*l*-triiodothyronine)

Dosage for cretinism or severe hypothyroidism in children is the same as for adults with myxedema. Eventual maintenance dosage in the growing child may be higher than in the adult.

Overdosage: *Symptoms*—Headache, instability, nervousness, sweating, tachycardia, and unusual bowel motility. Angina pectoris or congestive heart failure may be induced or aggravated. Shock may develop. Massive overdosage may result in symptoms resembling thyroid storm; chronic excessive dosage will produce the signs and symptoms of hyperthyroidism.

Treatment—Shock—Supportive measures should be utilized. Treatment of unrecognized adrenal insufficiency should be considered.

Supplied: Square W/C monogrammed tablets of four potencies, each identified by a different color (see table); bottles of 100 and 1000.

E-GP-11-4C

WARNER-CHILCOTT Morris Plains, N.J. 07950 follow-up care but do not have a physician and do not fit into the more expensive emergency room set-up.

Grace Thorpe, MD, operates both clinics. As demand increases more interested physicians will be recruited. Three physicians, Clinton Wilson, MD, Richard Weiser, MD and Edwin Keegstra, MD, are subsidizing the salary of the physician at work in the prenatal clinic by the income received for deliveries of patients out of the clinic.

December elections voted for Wayne officers

The Wayne County Medical Society's Council has ruled that the WCMS bylaws be amended to place the society's officers and committees on a calendar year with election in December. Previously, the Wayne officers have been elected in May. Nearly all other medical societies hold their elections at the close of the calendar year. Current WCMS officers have been asked to serve until December, 1971.

Kent physicians Staffing vasectomy clinic

Kent County physicians are rotating their services in a new Vasectomy Clinic established by the Kent County Health Department and the Planned Parenthood Association of Kent County for those men who cannot afford the services of a private physician.

David Beebe, MD, and Jerry Irwin, MD, started the clinic in August. There are now four operations performed each session by a roster of 11 surgeons and urologists from the community who rotate through the clinic.

The clinic is open every other Saturday by appointment at the Planned Parenthood Association of Kent County. As of January, 33 vasectomies had been performed, and 44 men were on the waiting list for the operation.

Kalamazoo Academy hears talk on death

The Kalamazoo Academy of Medicine scheduled a talk by Elisabeth Kubler-Ross, Assistant Professor of Psychiatry, University of Chicago, for its annual Physician-Clergyman Night Jan. 19. Doctor Kubler-Ross discussed "Death in our Society."

St. Clair physicians endorse pollution work

Members of the St. Clair County Medical Society have voted unanimously to go on record as endorsing the work and goals of Pollution Probe of St. Clair County to reduce pollution in the district. Their action followed an address before the medical society by the president of the Pollution Probe.

New column begun in Genesee Bulletin

A new column made its debut in the January issue of the Bulletin of the Genesee County Medical Society. Called "The Question Corner," the column will deal with thought-provoking questions concerning the "practice" of medicine. The questions are posed by selected members of the society each month. The column is edited by Vernon C. Urich, MD, the associate editor of the Bulletin.

Taste!

Dicarbosil®
ANTACID

Your ulcer patients and others will love it. Specify DICARBOSIL 144's—144 tablets in 12 rolls.

ARCH LABORATORIES
319 South Fourth Street, St. Louis, Missouri 63102

When Constipation is a Concern . . .

Consider

DOXIDAN® The Logical Laxative

(laxative with stool softener)

Doxidan relieves constipation:

- **gently**—minimal laxative side effects
- **predictably**—overnight results
- **conveniently**—one or two capsules at bedtime
- **economically**—costs less per effective daily dose*

Composition: Each capsule contains 50 mg. danthron N.F. and 60 mg. dioctyl calcium sulfosuccinate. Supplied: Bottles of 30, 100 (FSN 6505-074-3169) and 1000 (FSN 6505-890-1247) and Unit Dose 100's (10 x 10 strips).

HOECHST
PHARMACEUTICAL CO.
Somerville, N.J. 08876 U.S.A.

*based on actual drug store survey of prescribed dosages

C-168

U.S.S.R
CHINA
INDIA
SAIGON
INDONESIA
AUSTRALIA

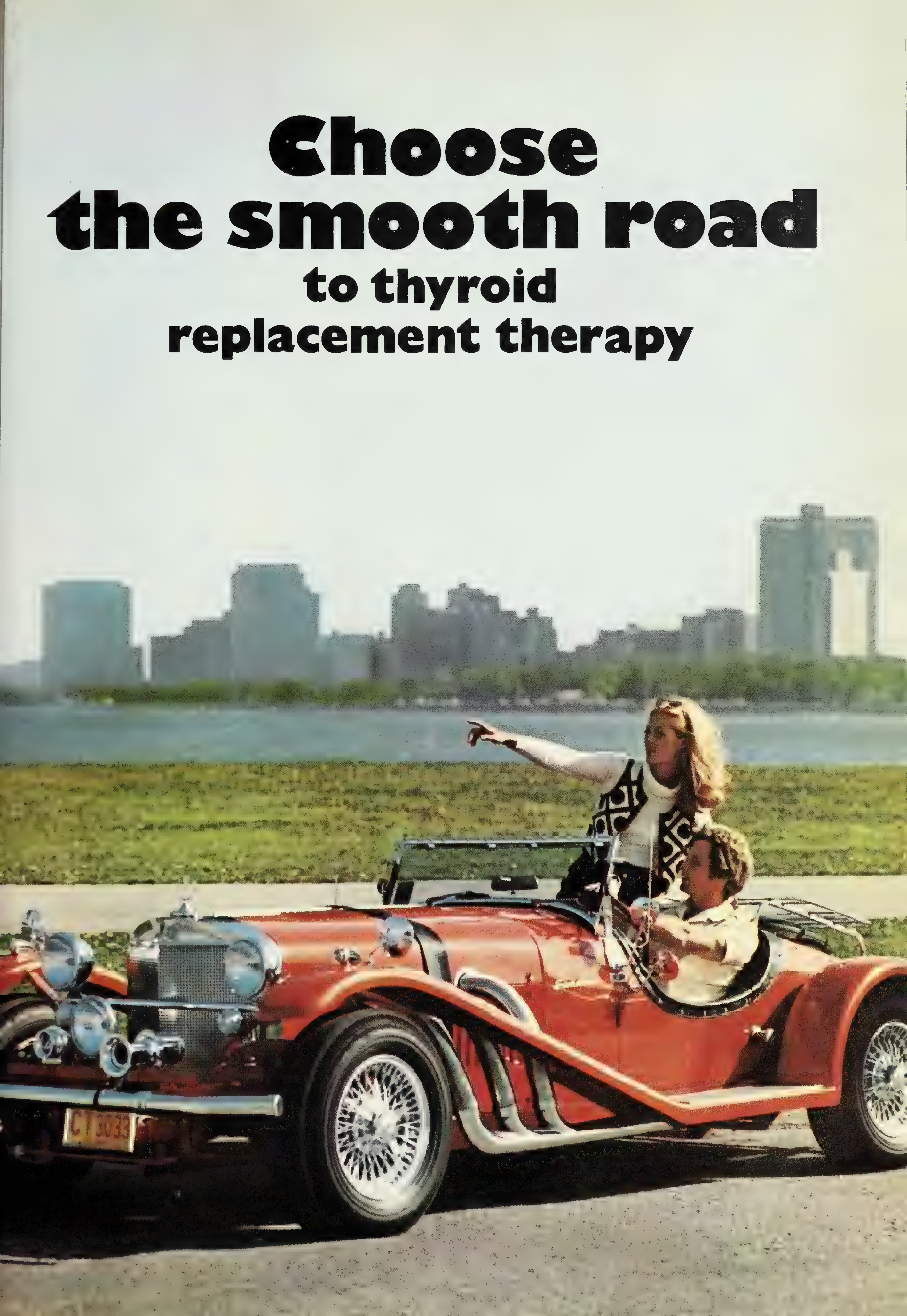
"Around the World in 80 Days"...

. . .An expense-paid trip with one hitch -- a 60-day hitch in a South Viet Nam civilian hospital delivering vitally needed medical care to the people of South Viet Nam.

American physicians are urgently needed, especially general practitioners, general surgeons, internists, ophthalmologists, orthopedic surgeons, pediatricians, and preventive medicine specialists.

For further information please write to:

Program Director
Volunteer Physicians for Viet Nam
American Medical Association
535 North Dearborn Street
Chicago, Illinois 60610


Choose
the smooth road
to thyroid
replacement therapy
CT 5033

The automatic

transition.

Your patients start thyroid therapy smoothly, easily. They feel better all along the way with no metabolic "bumps."

The gradual physiologic action of T_4 SYNTHROID provides virtually an "automatic" transition through the range of complete thyroid replacement therapy.[1]

Predictably responsive!

This kind of comfortable patient response has made SYNTHROID the most widely prescribed brand of thyroid drug in the United States. It's a Cadillac of thyroid medications ...with Volkswagen economy.[2]

The road to normalized thyroid status is a continuous one. You make it smooth and economical with SYNTHROID.

1. The deiodination of T_4 to T_3 at the cellular level has been discussed in the literature. Reprints on the subject are available from the Flint Laboratories Medical Department. Use of T_4 alone therefore provides your patients with a natural hormone combination of T_3—T_4.
2. Patient cost of SYNTHROID is less than a penny a day more than desiccated thyroid. SYNTHROID costs patients nearly 50% *less* than the synthetic combination products: American Druggist BLUEBOOK, March 1970-71

Synthroid®
(sodium levothyroxine)

FREE
MEDICATION DISPENSERS
TO START ALL YOUR PATIENTS ON SYNTHROID, IN THESE STRENGTHS:
0.05 mg. (white); 0.1 mg. (yellow); 0.15 mg. (violet); 0.2 mg. (pink).

seven color-coded strengths plus injectable

Indications: SYNTHROID (sodium levothyroxine) is specific replacement therapy for diminished or absent thyroid function resulting from primary or secondary atrophy of the gland, congenital defect, surgery, excessive radiation, or antithyroid drugs. Indications for SYNTHROID (sodium levothyroxine) **Tablets** include myxedema, hypothyroidism without myxedema, hypothyroidism in pregnancy, pediatric and geriatric hypothyroidism, hypopituitary hypothyroidism, simple (non-toxic) goiter, and reproductive disorders associated with hypothyroidism. SYNTHROID (sodium levothyroxine) **Injection** is indicated in myxedematous coma and other thyroid dysfunctions where rapid replacement of the hormone is required. When a patient does not respond to oral therapy, SYNTHROID (sodium levothyroxine) injection may be administered intravenously to avoid any question of poor absorption by either the oral or the intramuscular route.
Precautions: As with other thyroid preparations, an overdosage may cause diarrhea or cramps, nervousness, tremors, tachycardia, vomiting and continued weight loss. These effects may begin after four or five days or may not become apparent for one to three weeks. Patients receiving the drug should be observed closely for signs of thyrotoxicosis. If indications of overdosage appear, discontinue medication for 2-6 days, then resume at a lower dosage level. In patients with diabetes mellitus, careful observations should be made for changes in insulin or other antidiabetic drug dosage requirements. If hypothyroidism is accompanied by adrenal insufficiency, as Addison's Disease (chronic subcortical insufficiency), Simmond's Disease (panhypopituitarism) or Cushing's syndrome (hyperadrenalism), these dysfunctions must be corrected prior to and during SYNTHROID (sodium levothyroxine) administration. The drug should be administered with caution to patients with cardiovascular disease; development of chest pains or other aggravations of cardiovascular disease requires a reduction in dosage.
Contraindications: Thyrotoxicosis, acute myocardial infarction.
Side effects: The effects of SYNTHROID (sodium levothyroxine) therapy are slow in being manifested. Side effects, when they do occur, are secondary to increased rates of body metabolism; sweating, heart palpitations with or without pain, leg cramps, and weight loss. Diarrhea, vomiting, and nervousness have also been observed. Myxedematous patients with heart disease have died from abrupt increases in dosage of thyroid drugs. Careful observation of the patient during the beginning of any thyroid therapy will alert the physician to any untoward effects.

In most cases with side effects, a reduction of dosage followed by a more gradual adjustment upward will result in a more accurate indication of the patient's dosage requirements without the appearance of side effects.
Dosage and Administration: The activity of a 0.1 mg. SYNTHROID (sodium levothyroxine) TABLET is equivalent to approximately one grain thyroid, U.S.P. Administer SYNTHROID tablets as a single daily dose, preferably after breakfast. In hypothyroidism without myxedema, the usual initial adult dose is 0.1 mg. daily, and may be increased by 0.1 mg. every 30 days until proper metabolic balance is attained. Clinical evaluation should be made monthly and PBI measurements about every 90 days. Final maintenance dosage will usually range from 0.2-0.4 mg. daily. In adult myxedema, starting dose should be 0.025 mg. daily. The dose may be increased to 0.05 mg. after two weeks and to 0.1 mg. at the end of a second two weeks. The daily dose may be further increased at two-month intervals by 0.1 mg. until the optimum maintenance dose is reached (0.1-1.0 mg. daily).
Supplied: Tablets: 0.025 mg., 0.05 mg., 0.1 mg., 0.15 mg., 0.2 mg., 0.3 mg., 0.5 mg., scored and color-coded, in bottles of 100 and 500. Injection: 500 mcg. lyophilized active ingredient and 10 mg. of Mannitol, N.F., in 10 ml. single-dose vial, with 5 ml. vial of Sodium Chloride Injection, U.S.P., as a diluent. SYNTHROID (sodium levothyroxine) INJECTION may be administered intravenously utilizing 200-400 mcg. of a solution containing 100 mcg. per ml. If significant improvement is not shown the following day, a repeat injection of 100-200 mcg. may be given.

FLINT LABORATORIES
DIVISION OF TRAVENOL LABORATORIES, INC
Morton Grove, Illinois 60053

As your hypothyroid patients travel along the smooth road, let us be of service in these 4 specific ways:

1 FREE FILM AND BOOK ON HYPOTHYROIDISM: In a 30-minute, 16-mm. sound/color film, 5 prominent endocrinologists discuss "Thyroid Deficiency—Current Concepts of Diagnosis and Treatment". Film available on FREE loan to physician groups or hospitals.

A new book, soon to be published, is devoted to the clinical aspects of hypothyroidism. The author, a leading endocrinologist, describes the many faces of the condition and emphasizes the importance of clinical assessment of the patient. Write, or ask your Flint man, to be placed on our list to receive a free copy.

THYROID DEFICIENCY
Current concepts of diagnosis and treatment

2 NEW THYROID FUNCTION TEST BOOK: Newly published *Guideposts to Thyroid Therapy* discusses the tests most appropriate for use with each type of thyroid medication. Fully describes thyroid function tests and places their relative values in perspective for physicians. It will give you valuable new insights into the role of these tests in diagnosis and treatment. FREE—ask your Flint man.

Guideposts to Thyroid Therapy

3 TO START THERAPY, FREE TAB-MINDER dispensing units, color-coded to match colors of SYNTHROID tablets in starting dosage strengths. TAB-MINDER helps patients to regularly take the thyroid dosage you prescribe, avoid medication errors. Ask your Flint man.

FREE
MEDICATION DISPENSERS
TO START ALL YOUR PATIENTS ON SYNTHROID, IN THESE STRENGTHS:
0.05 mg. (white); 0.1 mg. (yellow); 0.15 mg. (violet); 0.2 mg. (pink).

4 SYNTHROID® INJECTION FOR THYROID EMERGENCIES: Whenever (as in myxedema coma) rapid replacement of thyroid hormone is needed to sustain life, prompt clinical response is essential. SYNTHROID INJECTION makes this therapy instantly available. Useful also in postoperative thyroid medication situations until oral therapy can be reinstated. Ask your Flint man for further information.

FLINT
Synthroid Injection
Sodium Levothyroxine

FLINT LABORATORIES
DIVISION OF TRAVENOL LABORATORIES, INC.
Morton Grove, Illinois 60053

Ancillary

Woman's Auxiliary to MSMS

The state officers of the Woman's Auxiliary to the Michigan State Medical Society for the 1970-71 year are:

President:
Mrs. Francis P. Rhoades, 272 Ashland Ave., Detroit, 48215
President-elect:
Mrs. Charles Schoff, 5209 Sunset, Midland, 48640
First Vice President:
Mrs. Fleming Barbour, 2015 Lincoln Drive, Flint, 48503
Second Vice President:
Mrs. William J. Jones, 15839 Crescent Drive, Allen Park, 48101
Recording Secretary:
Mrs. S. A. Yannitelli, 28 Woodmere Lane, Battle Creek, 49018
Corresponding Secretary:
Mrs. Robert C. Horn, Jr., 90 N. Edgewood Drive, Grosse Pointe, 48236
Financial Secretary:
Mrs. Anthony J. Miltich, 2222 Colfax Ave., Flint, 48503
Treasurer:
Mrs. Chastine Mangelsdorf, 1201 Woodslea, Flint, 48507

State Medical Assistants

The officers of the Michigan State Medical Assistants Society for the year 1970-71 are:

President:
Mrs. Patricia Austin, 216 Michigan Theater Bldg., Ann Arbor, 48108
President-elect:
Mrs. Betty Boers, 611 Whitcomb, Kalamazoo, 49001
Vice President:
Miss Margaret Broadwell, 406 Professional Plaza, 3800 Woodward Ave., Detroit, 48201
Recording Secretary:
Mrs. Arlene L. Bublitz, 101 W. John, Bay City, 48706
Treasurer:
Mrs. Ethel J. Lundgren, 3125 Mackin Road, Flint, 48504
Speaker of the House:
Miss Marlouise Redman, 608 Eastland Center Professional Building, Detroit, 48226

A wide variety . . .

of articles of interest to Michigan physicians appeared in the February issue of **Michigan Medicine.** Included are the fourth installment in the University of Michigan report on the attitudes of Michigan physicians toward their postgraduate education opportunities; a special article by C. T. Hardwick, PhD, economic advisor to MSMS, on guaranteed health care; opinions by four Michigan doctors on encouraging young physicians to practice in rural and inner city areas; a detailed report of the actions of the Michigan delegation at the AMA Clinical Convention, plus the many, varied, monthly **Michigan Medicine** features. We hope you didn't miss them.

Latest MDPH figures reveal growing rates of venereal disease

Venereal disease in Michigan is a growing health problem, particularly for persons under the age of 25, according to figures just released by the Michigan State Department of Public Health.

The latest chart—which summarizes reported cases of infectious syphilis and gonorrhea for 1969—shows over 19,000 cases. Ten years earlier, in 1959, fewer than 6,000 cases were reported.

The 1969 figures include 606 cases of infectious syphilis—a slight decline from 1968—with the remaining 18,534 cases being gonorrhea—an increase of about 500 over the previous year. This year (1970) gonorrhea has increased by over 1,200 cases above the 1969 total.

Donald Coohon, MD, Chief of the department's Communicable Disease Control Division, points out "young persons under the age of 25 are involved in 63% of the cases reported."

Ambulatory care survey to involve doctors in Michigan

Some Michigan physicians may be included in the second phase of a study of national ambulatory medical care being conducted by the National Center for Health Statistics.

The second stage, planned for early this year, is to develop sound methodology and to refine procedures and definitions. The first stage, conducted in October, 1969, determined the feasibility of the survey, which has been supported by the AMA.

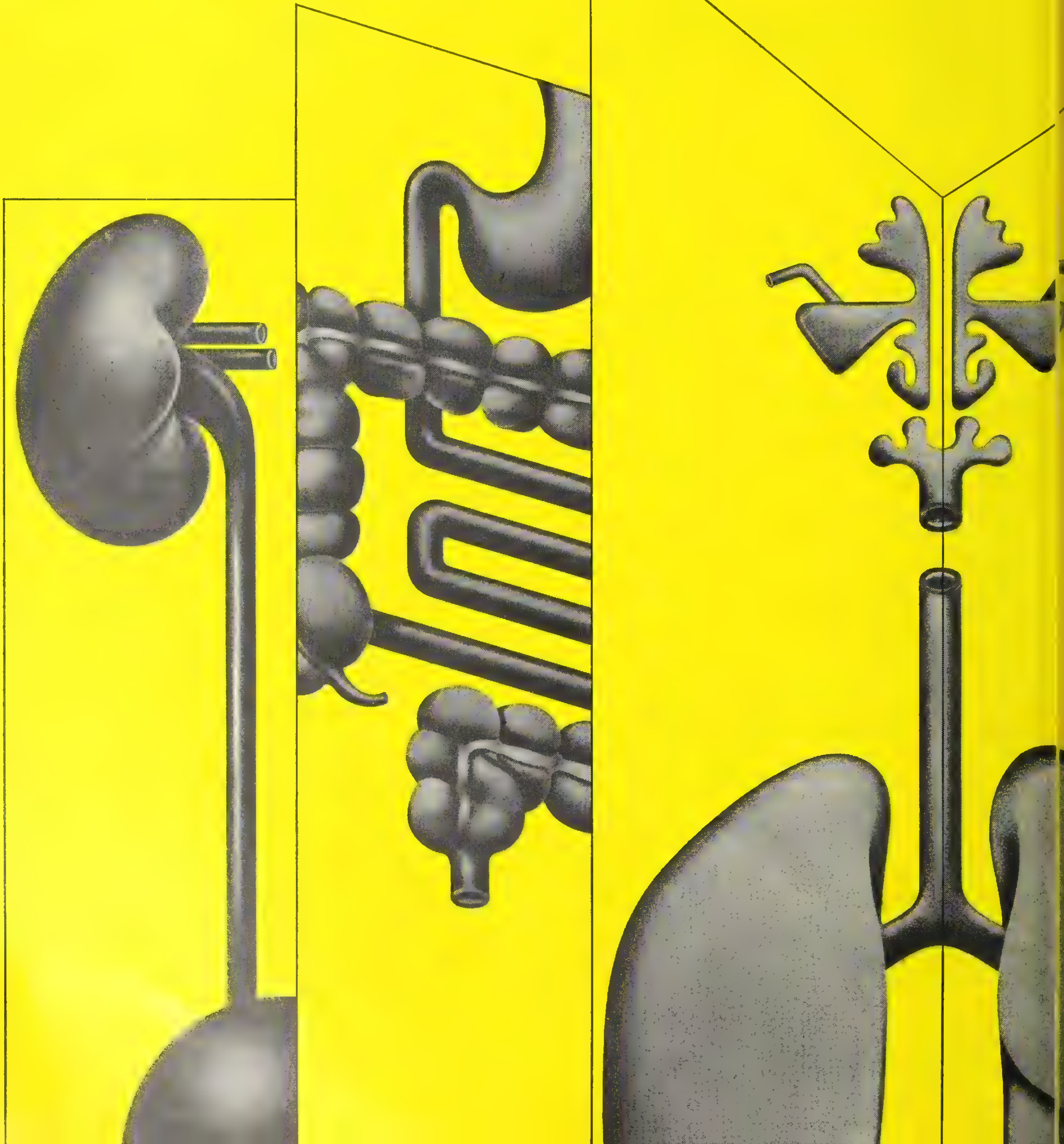
The object of the survey is to collect objective, quantitative information to describe the types of ambulatory patients seen by physicians, the nature of the patients' problems and the resources for their care. The survey is to be in full operation in 1972.

Tract Record.

A record of clinical efficacy in treating bacterial infections of the respiratory, genitourinary and gastrointestinal tracts caused by susceptible strains of pneumococci, H.influenzae, staphylococci, streptococci, Klebsiellae, E.coli, Enterobacter, Shigella.

A record of years of dependable broad-spectrum activity.

A record of high urine and serum antibiotic levels all with a 500mg. potency, b.i.d. convenience and low prescription cost.



Tetrex® bidCAPS®

(500 mg. tetracycline phosphate complex)

For complete information consult Official Package Circular.
(3) 4/2/70

Indications: Infections of respiratory, gastrointestinal and genitourinary tracts and skin and soft tissues due to tetracycline-sensitive organisms. In staphylococcal infections, indicated surgical procedures should be performed.

Contraindications: Hypersensitivity to tetracyclines.

Warnings: Photodynamic reactions have been produced by tetracyclines. Natural and artificial sunlight should be avoided during therapy. Stop treatment if skin discomfort occurs. With renal impairment, systemic accumulation and hepatotoxicity may occur. In this situation, lower doses should be used and serum estimations may be necessary during prolonged therapy. Tooth staining and enamel hypoplasia may be induced during tooth development (last trimester of pregnancy, neonatal period and childhood).

Precautions: Mycotic or bacterial superinfections may occur. Infants may develop increased intracranial pressure with bulging fontanels. Cases of gonorrhea with a suspected primary lesion of syphilis should have darkfield examinations before receiving treatment. In all other cases where concomitant syphilis is suspected, monthly serological tests should be performed for a minimum of 4 months.

Adverse Reactions: Glossitis, stomatitis, nausea, diarrhea, flatulence, proctitis, vaginitis, dermatitis, and allergic reactions may occur.

Usual Adult Dose: One Gm./day in 2 or 4 equally divided doses. Continue therapy for ten days in Group A beta-hemolytic streptococcal infections. Administer one hour before or two hours after meals.

Supplied: Capsules–250 mg. in bottles of 16 and 100. bidCAPS–500 mg. in bottles of 16 and 50.

A.H.F.S. Category 8:12

BRISTOL

BRISTOL LABORATORIES
Division of Bristol-Myers Co.
Syracuse, New York 13201

Milwaukee lab offers cont'g education project in "depression"

County medical societies, hospital staffs, and specialty groups are invited by Lakeside Laboratories, Milwaukee, to obtain further information about a new project in continuing medical education. The new service, offered by Medcom, Inc., deals with "depression" and includes three parts—a color, documentary film, a monograph, and a self-evaluation examination.

The learning experience covers causes of depression, symptoms, and treatment of depression. The project is available at no cost. For information, write to Lakeside Laboratories, Inc., Milwaukee, Wisconsin 53201.

MSU medical students begin 15 months in Michigan cities

All of Michigan State University's 30 students who will be the first to receive their medical degrees from MSU will spent their entire senior year in off-campus study in Grand Rapids, Flint, Saginaw or Lansing.

Beginning this month, the senior medical students will enter into 15 months' training at local hospitals, physicians' offices and health agencies. Fifteen of the 30 students will go to Grand Rapids.

One of the basic and important features of the program, according to Tom M. Johnson, MD, MSU coordinator for clinical programs, will be a "continuing out-patient experience," with the students "involved with certain families, providing total health care."

MSU will provide a set of graduation objectives, leaving it up to the four communities to devise programs to fulfill the objectives. The medical students are in MSU's third class of medical students, and will receive their MD degrees in 1972.

Governmental Health Care Assistance Programs

(Fourth of a series)

Services Available:

Under the jurisdiction of the Department of Mental Health, the state operates inpatient hospitals, outpatient clinics, day care centers and aftercare services for the mentally ill and mentally retarded. Each county of the state is assigned to a specific state hospital district and to a regional mental health service area. Fifty counties are also served by Community Mental Health Boards. The services of 163 state and local mental health units are available to residents of Michigan at locations indicated below.

Hospitals for Mentally Ill:

Kalamazoo, Ionia, Newberry, Northville, Pontiac, Traverse City, Ypsilanti, and Wayne County General.

Institutions for Mentally Retarded:

Caro, Coldwater, Fort Custer (Augusta), Gaylord, Howell, Lapeer, Mt. Pleasant, Muskegon, Newberry, Plymouth, and Wayne County Training School.

Special Hospitals for Selected Patients:

Clinical, inpatient, outpatient, and day hospital services are provided at the following locations:

1. Detroit (Lafayette Clinic and the Mental Health Drug Abuse Center); Northville (Hawthorn Center, for children). These are agencies of the Michigan Department of Mental Health.
2. Ann Arbor (Neuropsychiatric Institute and Children's Psychiatric Hospital), administered by the University of Michigan.

Community Outpatient Services:

Counties providing outpatient mental health services with support under Act 54 (1963) are located in 50 counties.

Residents of other areas receive outpatient services through county contracts with community mental health boards in neighboring counties, from state institutions serving the region, or from state-local community clinics located at Ironwood, Mt. Pleasant, Petoskey, Sault Ste. Marie, and Traverse City.

Community Inpatient Services:

Short-term inpatient psychiatric services are available in Alma, Alpena, Ann Arbor, Battle Creek, Bay City, Detroit, Grand Rapids, Kalamazoo, Lansing, Marquette, Midland, Muskegon, Pontiac, Port Huron, St. Joseph, Saginaw, Southfield, and Elkhart, Indiana (for residents of Cass and St. Joseph counties).

Eligibility:

Any person who is committed to a hospital for the mentally ill or the mentally retarded as a result of Probate Court proceedings is eligible for inpatient care. Voluntary admission may also be made if the patient is sufficiently oriented to make a decision on his own behalf. Commitment through the court may be made only after two physicians have signed certificates stating that, in their opinions, the patient requires hospitalization.

Any person who applies, or on whose behalf application is made, for diagnostic, consultative or treatment services in connection with mental disorders or deficiencies is eligible for outpatient care.

Application:

Application for inpatient treatment is made directly to the County Probate Court, or, if a voluntary admission, to the agency serving the county where patient resides.

(Continued on Page 257)

SOME PHYSICIANS KNOW what to do with their patients who are alcoholics or problem drinkers.

SOME PHYSICIANS WISH they knew what to do with them.

Have you thought of the Alcoholism Services of the Battle Creek Sanitarium Hospital? Since 1965 we have maintained an enviable record in the rehabilitation of the alcoholic or problem drinker.

A full range of services and specialties.

Give us a call
616-864-7121 Ext. 588 or 589

Battle Creek Sanitarium and Hospital
197 N. Washington Avenue
Battle Creek, Michigan 49016

check these figures...

they could lead to savings

Umbrella Excess Liability Policy — Our Schedule

- ✓ Physicians Class 1 & 2 . . $121.00 Annual Premium*
- ✓ Physicians Class 3, 4 & 5 . $205.00 Annual Premium*

* The above premiums assume ownership or use of 2 residences, 2 automobiles, professional liability exposure (basically insured for $100,000/ $300,000), and professional office premises exposure. These premiums do **not** include basic Malpractice coverage. The Umbrella plan is sponsored by the Michigan State Medical Society while the basic Malpractice policy is **not.**

MALPRACTICE INSURANCE ALSO AVAILABLE

CALL US COLLECT (517) 484-2578

---

bps **BEN P. STRATTON AGENCY, INC.**
ESTABLISHED IN 1937

107 N. BUTLER BLVD.
LANSING, MICHIGAN 48903
(517) 484-2578

19400 WEST TEN MILE ROAD
SOUTHFIELD, MICHIGAN 48075
357-5083

Someone acutely ill needs this bed.

It's available because of Medicenter.

Because of Medicenter, this hospital bed can be used by someone who needs it. That's what Medicenter is all about. A recuperative care facility specializing in the needs of patients who no longer require the intensive care of a general hospital and who are on the road to recovery.

But that's only part of the Medicenter story . . . Beautifully carpeted and draped patient rooms, tasty foods, recreation facilities, physical and inhalation therapy are just a few of many luxurious health care features that make recovery in the Medicenter as pleasant and rapid as possible. The Medicenter is within minutes of acut care facilities. A professional medical staff supervise all recuperative care under the direct orders of each pa tient's personal physician. Room rates are nominal — about one-half the cost of general hospitals. And there' a growing list of insurance companies that already provid coverage for Medicenter recuperation.

The Medicenter is a vital addition to our community' health care system. Get to know the Medicenter soon. Your visit or inquiry is welcome anytime.

MEDiCENTER
OF AMERICA

A Nice Place to Get Well

Medicenter of America / Chelsea • Escanaba • Flint, Michigan

Application for outpatient treatment is made directly to the mental health unit serving the patient's county of residence. Referral for outpatient treatment may be made by the person himself, or by parent, relative, friend, clergyman, physician, school, or other community agency.

Financial Assistance:

Extent of financial assistance for inpatients is determined by the Probate Court at the time of commitment, or by the hospital superintendent if a voluntary admission. Rates for children are established by law. Responsible relatives may be required to pay the full cost of hospitalization, a portion of the cost, or nothing.

For outpatients, the person receiving the services or responsible relatives are expected to pay all or a portion of the cost if able to do so. Collection of fees for community services is optional with the Community Mental Health Services Board or the clinic board. No person is refused service because of inability to pay an established fee.

Additional Information:

Information on procedures for inpatient services may be obtained from any County Probate Court, State Hospital Superintendent, or the Department of Mental Health.

Any inquiries or requests for information concerning outpatient treatment may be directed to the nearest outpatient mental health unit, or to the Department of Mental Health, Information Office, Lewis Cass Building, Lansing, Michigan 48926.

Veteran's Hometown Medical Care Program

Services Available:

1. Treatment by a private physician at Veterans Administration expense is available to veterans, when treatment is not feasible in a Veterans Administration Clinic or Hospital. Entitlement is limited to treatment of service-connected conditions.

2. Home nursing care may be furnished to veterans previously determined eligible for outpatient treatment, under certain restricted conditions.

3. In certain restricted circumstances, hospitalization in a non-Veterans Administration Hospital may be provided for treatment of a service-connected condition, providing the urgency of the condition precludes admission to a Veterans Administration Hospital.

4. Prescriptions written in connection with authorized treatment of service-connected disabilities, may be brought or mailed to the Pharmacy, Veterans Administration Hospital, Allen Park, Michigan. If presented in person, they will be compounded immediately; if mailed, medication will be forwarded within a few days. It is not feasible to mail prescriptions when (a) medication must be started immediately (within 10 days); (b) the prescription contains narcotics; (c) the prescription contains bulky items or liquids in quantities larger than one quart. Prescriptions may be filled by a local pharmary if submission to the Veterans Administration Pharmacy is not feasible.

It is the policy of the Hometown Care Program to provide the best medical care possible, (utilizing Veteran's Administration facilities to the greatest extent practicable) consistent with the needs and best interests of both the patient and the government.

ELIGIBILITY: It is stressed that medical services available in this program are limited to treatment of veterans for a service-connected condition only. The physician rendering treatment must be licensed to practice in the State of Michigan.

Application:

1. Application for treatment by a private physician who is licensed in the State of Michigan may be made by mail or by telephone (562-6000, extension 469 or 466) directly to the Authorizing Physician, Outpatient Clinic, Veterans Administration Hospital, Allen Park, Michigan.

It should be stressed that authorization for treatment under this program should be obtained in advance.

In the event non-hospital treatment is rendered for a service-connected condition in an emergency situation, the physician and/or outpatient facility must send notification to the Outpatient Clinic in Allen Park within fifteen (15) days of the date such services were rendered, to be considered for payment. (All claims are examined, but not all are payable, because some patients do not meet the eligibility requirements for services available in this program.)

2. Authorization for home nursing care of veterans previously determined eligible for outpatient treatment must be obtained in advance from the Chief, Outpatient Clinic, Veterans Administration Hospital, Allen Park, Michigan.

3. Authorization for hospitalization in a non-Veterans Administration Hospital, for treatment of a service-connected condition, should be obtained

(Continued on Page 261)

WHEN TRAUMA
RESULTS IN PAIN...

This photograph in no way implies
an endorsement of Norgesic by Jerry Quarry

Norgesic...the versatile analgesic provides effective analgesia and relief of associated muscle spasm

offers fast onset of symptomatic relief

produces a high level of analgesia

affords sustained pain relieving action

provides predictable relief—overall satisfactory response in approximately 80% of patients

the versatile analgesic **NORGESIC®**

(orphenadrine citrate, 25 mg.; aspirin, 225 mg.; phenacetin, 160 mg.; caffeine, 30 mg.)

Contraindications: Because of the mild anticholinergic effect of orphenadrine, Norgesic should not be used in patients with glaucoma, pyloric or duodenal obstruction, achalasia, prostatic hypertrophy or obstructions at the bladder neck. Norgesic is also contraindicated in patients with myasthenia gravis and in patients known to be sensitive to aspirin, phenacetin or caffeine.

Since mental confusion, anxiety and tremors have been reported in patients receiving orphenadrine and propoxyphene concurrently, it is recommended that Norgesic not be given in combination with propoxyphene (Darvon®).

Warnings: USE IN PREGNANCY: Since safety of the use of this preparation in pregnancy, during lactation, or in the child-bearing age has not been established, use of the drug in such patients requires that the potential benefits of the drug be weighed against its possible hazard to the mother and child.

USE IN CHILDREN: The safe and effective use of this drug in children has not been established; therefore, the physician must weigh the benefits against the potential hazards.

Precautions: It has been reported that prolonged or excessive use of phenacetin may result in nephrotoxicity. Caution, therefore, should be exercised when Norgesic is administered to patients with renal disorders. It should also be used with caution in patients with tachycardia.

Adverse Reactions: Side effects of Norgesic are those seen with APC or those usually associated with mild anticholinergic agents. These may include tachycardia, palpitation, urinary hesitancy or retention, dry mouth, blurred vision, dilatation of the pupil, increased intraocular tension, weakness, nausea, vomiting, headache, dizziness, constipation, drowsiness, and rarely, urticaria and other dermatoses. Infrequently an elderly patient may experience some degree of confusion. Mild central excitation and occasional hallucinations may be observed. These mild side effects can usually be eliminated by reduction in dosage. One case of aplastic anemia associated with the use of Norgesic has been reported. No causal relationship has been established.

Dosage and Administration: Adults—1 to 2 tablets 3 to 4 times daily.

Riker Laboratories, Inc.
NORTHRIDGE, CALIFORNIA 91324

A SUBSIDIARY OF
3M
COMPANY

NOLUDAR® 300
12
1
2
3
4
5
7
8
9
10
11

one capsule for the rest of the night

(methyprylon)

Before prescribing, please consult complete product information, a summary of which follows:
INDICATION: Relief of insomnia of varied etiology.
CONTRAINDICATIONS: Patients with known hypersensitivity to the drug.
WARNINGS: Caution patients about combined effects with alcohol and other CNS depressants. Caution against hazardous occupations requiring complete mental alertness, such as operating machinery or driving a motor vehicle shortly after ingesting the drug.
Physical and Psychological Dependence: Physical and psychological dependence rarely reported. If withdrawal symptoms do occur they may resemble those associated with withdrawal of barbiturates and should be treated in the same fashion. Use caution in administering to individuals known to be addiction-prone or those whose history suggests they may increase the dosage on their own initiative. Repeat prescriptions should be under adequate medical supervision.
Usage in Pregnancy: Weigh potential benefits in pregnancy, during lactation, or in women of childbearing age against possible hazards to mother and child.
PRECAUTIONS: If sleeplessness is pain-related, an analgesic should also be prescribed. Perform periodic blood counts if used repeatedly or over prolonged periods. Total daily intake should not exceed 400 mg, as greater amounts do not significantly increase hypnotic benefits.
ADVERSE REACTIONS: At recommended dosages, there have been rare occurrences of morning drowsiness, dizziness, mild to moderate gastric upset (including diarrhea, esophagitis, nausea and vomiting), headache, paradoxical excitation and skin rash. There have been a very few isolated reports of neutropenia and thrombocytopenia; however, the evidence does not establish that these reactions are related to the drug.

ROCHE

ROCHE LABORATORIES
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

Specialized Service
IN
PROFESSIONAL LIABILITY INSURANCE
is a high mark of distinction

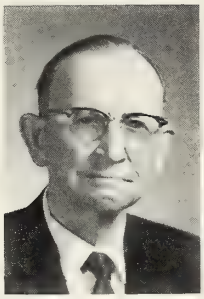
THE
MEDICAL PROTECTIVE COMPANY
FORT WAYNE, INDIANA

Professional Protection Exclusively since 1899

DETROIT OFFICE: R. K. Wind and J. K. Galloway, Representatives
27200 Lahser Road, Southfield 48075, Telephone: (Area Code 313) ELgin 3-4848 or 444-1439

GRAND RAPIDS OFFICE: G. J. Haworth, Representative
422 Federal Square Building, Grand Rapids 49502 Telephone: 616-454-4477

In memoriam



Doctor Cook

Henry Cook, M.D.
Flint

Henry Cook, M.D., designated by MSMS as Michigan's Outstanding Physician in 1966-67, died Jan. 17 at the age of 84.

Doctor Cook served as MSMS president in 1937-38 and was a member of the MSMS Council for 12 years preceding his presidency. By his own statement, he was delegate to the MSMS House so many times that he lost count. In 1959 he was given a 50-year pin for his half-century of service.

He was voted president-elect of the Genesee County Medical Society in 1946. Doctor Cook served as chief of staff at Hurley Hospital for nine years and practiced in Flint since his graduation from Detroit College of Medicine and Surgery in 1909.

Perhaps Doctor Cook's greatest single civic contribution was made in the field of education. For almost 36 years he served on the Flint Board of Education and four separate times he was president of the board. He was named to the Citizens' Advisory Committee of the Board of Education in the mid-sixties.

In recognition of his many contributions to Flint's Northern High School, planning and supervising its construction and serving as team physician and unofficial coach, the new school auditorium was named Cook Auditorium.

Doctor Cook also served many years as examiner and consultant for the Flint Trolley Coach Co. and as surgeon for the Grand Trunk and Western Railroad.

Doctor Cook was a member of the American Industrial Medical Association and the Michigan Industrial Physician Associations, serving as president of the latter.

Harry E. Bagley, M.D.
Dearborn

Harry Edison Bagley, M.D., Dearborn general practitioner since 1926, died Jan. 13 at the age of 74.

Doctor Bagley served on the staffs of Mt. Carmel-Mercy and Crittenton General Hospitals in Detroit and was a member of the Dearborn Library Commission from 1960 to 1968. He was a graduate of McGill University Medical School.

(Continued on Page 265)

ASSISTANCE PROGRAMS/Continued

in advance, if possible. Without advance authorization, (i.e., the patient requires immediate surgery) the Outpatient Clinic at the Veterans Administration Hospital in Allen Park must be notified within seventy-two (72) hours of admission if the hospital or physician desires to be considered for payment. Because some patients do not meet the eligibility requirements for services available in this program, all claims are examined but all are not payable.

Authorization may be obtained by a telephone call to the Authorizing Physician (Extension 469 or 466), Outpatient Service, Veterans Administration Hospital, Allen Park, Michigan.

Any physician may participate in the program if licensed to practice in the State of Michigan and will accept the fees approved by the Veterans Administration.

ADDITIONAL INFORMATION: Communicate directly with the Chief, Outpatient Service, Veterans Administration Hospital, Allen Park, Michigan.

Veteran's Hospitalization And Outpatient Care

Services Available:

Total hospital facilities and services are available for treatment of medical, surgical, and psychiatric conditions. General medical and surgical hospitals are located at Ann Arbor, Allen Park, Iron Mountain, and Saginaw, Michigan. A psychiatric hospital is located at Battle Creek, Michigan.

An outpatient clinic is located with the hospital at Allen Park, Michigan, and is equipped to provide normal outpatient care for medical, surgical and psychiatric conditions.

(Continued on Page 265)

THE MICHIGAN HEART ASSOCIATION

22ND SCIENTIFIC SESSIONS AND HEART DAYS

April 29 & 30; May 1 Cobo Hall, Detroit

Designed for practicing clinicians *Valued by the American Association of General Practice at 11 credit hours*

Friday, April 30

• THE FAILING MYOCARDIUM

Clinical Diagnosis and Management
Noble O. Fowler, M.D., Director,
Division of Cardiology, University of Cincinnati

WILSON-MYERS LECTURE
Clinical and Laboratory Measures of Myocardial Function
Eugene Braunwald, M.D., Chairman,
Dept. of Medicine, University of California, San Diego

Ventricular Failure and Cardiogenic Shock—Particular Reference to Myocardial Infarction
H.J.C. Swan, M.D., Ph.D., F.R.C.P., Chief,
Cardiology, Cedars-Sinai Medical Center, Los Angeles

• TREATMENT OF THE FAILING MYOCARDIUM

Digitalis: New Thoughts about an Old Drug
James E. Doherty, M.D., Professor,
University of Arkansas

Diuretics: Their Use and Abuse
Walter M. Kirkendall, M.D., Director,
Renal-Hypertension-Electrolyte Division, University of Iowa Hospitals

Panel—Acute Congestive Heart Failure
Chairman, Irwin J. Schatz, M.D.,
Chief, Cardiovascular Disease
Wayne State University Medical School

Panel—Chronic Congestive Heart Failure
Chairman, Park W. Willis III, M.D.,
Director of Cardiology
University of Michigan Medical School

Saturday, May 1

FOUR CONCURRENT SESSIONS

• *CARDIOVASCULAR PROBLEMS IN RENAL INSUFFICIENCY*

Management of Hypertension Associated with Renal Disease

Management of Cardiac Complications of Renal Disease

Cardiovascular Complications of Hyper- and Hypokalemia

• *HYPERLIPOPROTEINEMIAS*

Basic Mechanisms

Clinical and Laboratory Recognition

Panel: Management

NOTE: For nurses, a CARDIOVASCULAR PROGRAM, all day Friday, April 30, offers a lecture and concurrent workshops. annual meeting of MHA members will be on Friday.

The Headquarters Hotel is the Pontchartrain; make reservations early.

SATURDAY, MAY 1

● *ADVANCES IN CARDIAC RHYTHM THERAPY*

Pharmacology and Clinical Use of Propranolol

Pharmacology and Clinical Use of Bretylium Tosylate

Current Management of Atrial Flutter and Fibrillation

Pharmacology and Clinical Use of Lidocaine and Diphenylhydantoin

Antiarrhythmic Drug Panel

The Preblock Syndrome

Panel: Clinical Management of Patients With Preblock Patterns

● *ELECTRICAL SAFETY FOR THE CARDIOVASCULAR PATIENT*

Physiology of Electrical Shock

Electrical Hazard to the Cardiac Patient

A Program to Make Your C.C.U. Safer

Thursday, April 29

YES—YOU CAN DO SOMETHING WITH STROKE!

● *STROKE WARNING SIGNS & RISK FACTORS*

Diagnosis & Management of Transient Ischemic Attack	*Louis Rentz, D.O. Assoc. Prof., Mich. Osteopathic College*
Medical Management of Conditions Pre-Disposing to Stroke	*John Gilroy, M.D., Director of Neurology, WSU School of Medicine*
Surgical Management of Conditions Pre-Disposing to Stroke	*Arthur B. Eisenbrey, M.D., Neurosurgeon, Harper and Children's Hospitals, Detroit*
Diagnosis & Management of Acute Stroke	*Dr. Gilroy*

● *ORGANIC & EMOTIONAL PROBLEMS OF STROKE*

Crisis Following Stroke

Personality & Motivational Factor Influencing Recovery

Reestablishing Lines of Communication

Managing Family Problems Arising From Stroke

Subtle Deficits Interfering With Functional Recovery

● *FOUR CONCURRENT WORKSHOPS*

#1 Acute Care Stroke Units—Panel

#2 Exercise, Positioning & Transfer Techniques Demonstration

#3 Family Education Programs—Panel

#4 Creative Rehabilitation Activities in Michigan

Doctor: If you have personnel in your office who do ECG's, send them to:

● THE FOURTH ANNUAL SEMINAR FOR ECG TECHNICIANS

To improve ECG skills—To teach methods and techniques.

Characteristics of the Normal ECG

Abnormal ECG

Standardization

Trouble Shooting: Graphic Techniques

● CARDIOPULMONARY RESUSCITATION SEMINAR

THE COMMUNITY AND CARDIOPULMONARY RESUSCITATION TRAINING

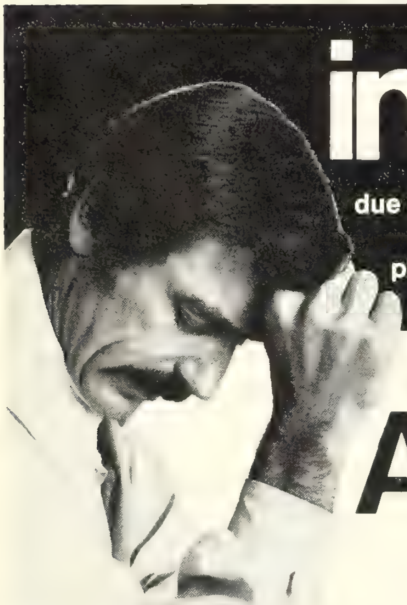
SPEAKER: Thomas Burnap, M.D., Director, Department of Anesthesiology, Presbyterian Hospital of Dallas.

The since 1932 **PM**® PROFESSIONAL MANAGEMENT • FOR PHYSICIANS AND DENTISTS **Group**

Professional Management Offices
In These Cities . . . . .

ANN ARBOR, BATTLE CREEK, BERKLEY, DETROIT,
FLINT, GRAND RAPIDS, KALAMAZOO, LANSING,
MUSKEGON, SAGINAW AND TRAVERSE CITY.

Black and Skaggs Associates
PM Systems, Incorporated
181 North Avenue PM BUILDING Battle Creek, Michigan 49017



The treatment of
impotence
due to androgenic deficiency in the American male.
The concept of chemotherapy plus the physician's psychological support is confirmed as effective therapy.

NEW CLINICAL STUDY

The Treatment of Impotence
with Methyltestosterone Thyroid
(100 patients—Double Blind Study)
T. Jakobovits
Fertility and Sterility, January 1970
Official Journal of the
American Fertility Society

Android®
(thyroid-androgen) tablets

Double-Blind Study and Type of Patient: 100 patients suffering from impotence. Of the patients receiving the active medication (Android) a favourable response was seen in 78%. This compares with 40% on placebo. Although psychotherapy is indicated in patients suffering from functional impotence the concomitant role of chemotherapy (Android) cannot be disputed.

Choice of 4 strengths:

Android

Each yellow tablet contains:
Methyl Testosterone . . 2.5 mg.
Thyroid Ext. (1/6 gr.) . . 10 mg.
Glutamic Acid . . . . 50 mg.
Thiamine HCL . . . . 10 mg.
Dose: 1 tablet 3 times daily.
Available:
Bottles of 100, 500, 1000

REFER TO PDR

Android-HP
HIGH POTENCY

Each red tablet contains:
Methyl Testosterone . . 5.0 mg.
Thyroid Ext. (½ gr.) . . . 30 mg.
Glutamic Acid . . . . 50 mg
Thiamine HCL . . . . 10 mg.
Dose: 1 tablet 3 times daily.
Available:
Bottles of 100, 500, 1000.

Android-X
EXTRA HIGH POTENCY

Each orange tablet contains:
Methyl Testosterone . 12.5 mg.
Thyroid Ext. (1 gr.) . . . . 64 mg.
Glutamic Acid . . . . 50 mg
Thiamine HCL . . . . 10 mg.
Dose: 1 or 2 tablets daily.
Available:
Bottles of 60, 500.

Android-Plus
WITH HIGH POTENCY
B-COMPLEX AND VITAMIN C

Each white tablet contains:
Methyl Testosterone . . 2.5 mg.
Thyroid Ext. (¼ gr.) . . . 15 mg.
Ascorbic Acid (Vit. C) . 250 mg.
Thiamine HCL . . . . 25 mg.
Glutamic Acid . . . . 100 mg.
Pyridoxine HCL . . . . 5 mg.
Niacinamide . . . . 75 mg.
Calcium Pantothenate . 10 mg.
Vitamin B-12 . . . . 2.5 mcg.
Riboflavin . . . . 5 mg.
Dose: 2 tablets daily.
Available: Bottles of 60, 500.

Contraindications: Android is contraindicated in patients with prostatic carcinoma, severe cardiorenal disease and severe persistent hypercalcemia, coronary heart disease and hyperthyroidism. Occasional cases of jaundice with plugging biliary canaliculi have occurred with average doses of Methyl Testosterone Thyroid is not to be used in heart disease and hypertension

Warnings: Large dosages may cause anorexia, nausea, vomiting abdominal pain, diarrhea, headache, dizziness, lethargy, paresthesia, skin eruptions, loss of libido in males, dysuria, edema, congestive heart failure and mammary carcinoma in males

Precautions: If hypothyroidism is accompanied by adrenal insufficiency the latter must be corrected prior to and during thyroid administration

Adverse Reactions: Since Androgens, in general, tend to promote retention of sodium and water, patients receiving Methyl Testosterone, in particular elderly patients, should be observed for edema

Hypercalcemia may occur, particularly in immobilized patients: use of Testosterone should be discontinued as soon as hypercalcemia is detected

References: 1. **Montesano, P., and Evangeliste, I.** Methyltestosterone-thyroid treatment of sexual impotence. Clin Med 12:69, 1966. 2. **Dublin, M. F.** Treatment of impotence with methyltestosterone-thyroid compound. West Med 5:67, 1964 3. **Titeff, A. S.** Methyltestosterone-thyroid in treating impotence Gen Prac 25:6, 1962 4. **Hellman, L., Bradlow, H. L., Zumoff, B., Fukushima, D. K., and Gallagher, T. F** Thyroid-androgen interrelations and the hypocholesteremic effect of androsterone. J Clin Endocr 19:936, 1959. 5. **Farris, E. J., and Colton, S. W.** Effects of L-thyroxine and liothyronine on spermatogenesis J Urol 79·863, 1958 6. **Osol, A., and Farrar, G. E.** United States Dispensatory (ed. 25). Lippincott, Philadelphia, 1955, p. 1432. 7. **Wershub, L. P.** Sexual Impotence in the Male. Thomas, Springfield, Ill., 1959, pp. 79-99.

Write for literature and samples: BROWN **THE BROWN PHARMACEUTICAL CO., INC.** 2500 West 6th Street, Los Angeles, California 90057

Lawrence R. Banner, M.D.
Kalamazoo

Lawrence R. Banner, M.D., Kalamazoo physician and former president of the Kalamazoo Academy of Medicine, died Dec. 28 at the age of 63.

Doctor Banner had served as voluntary consultant to the National Red Cross blood program from 1961 to 1964 and as chairman of the board of directors of the Regional Red Cross Blood Center in Lansing. He was former chairman and member of the board of the Kalamazoo Red Cross Chapter and was instrumental in the start of the blood donation program of the Kalamazoo County Chapter of the Red Cross.

Doctor Banner was graduated from the Loyola University medical school and was a general practitioner. He served as chief of staff at Borgess Hospital, as medical advisor for many years to the Kalamazoo County Selective Service Board and on the staff of the Kalamazoo State Hospital.

Clair E. Basinger, M.D.
Grand Rapids

Clair E. Basinger, M.D., a pioneer in the development of open heart surgery in Grand Rapids, died Jan. 7 at the age of 49. The cause of death was complications following a cardiac arrest.

Doctor Basinger had helped develop an early model of the heart-lung machine with his colleagues in Grand Rapids. He was chairman of the research committee at Blodgett Hospital and was a member of the staffs of all the Grand Rapids hospitals and hospitals at Big Rapids, Cadillac and Reed City.

Doctor Basinger was a member of the national and state societies of thoracic surgeons, the American College of Chest Physicians, the American and Michigan Heart Associations, American College of Surgeons and served on the Board of Thoracic Surgery and on the American Board of Surgery.

James W. Boyd, M.D.
Adrian

James W. Boyd, M.D., Adrian radiologist, died Dec. 23 apparently of a heart attack. He was 48.

Doctor Boyd was affiliated with Bixby Hospital of Adrian and Herrick Hospital of Tecumseh and was a life-long resident of the Adrian area. He was graduated from Wayne State University School of Medicine. He was certified by the American Board of Radiology.

John H. Boyd, M.D.
Trenton

John H. Boyd, M.D., Trenton general practitioner for 50 years, died Jan. 8 at the age of 72.

Doctor Boyd was a graduate of McGill University School of Medicine and was affiliated with Wyandotte General Hospital in Detroit and Seaway Hospital in Trenton. He was a general practitioner.

Ray S. Dixon, M.D.
Grand Ledge

Ray S. Dixon, retired Detroit physician, died Dec. 22 at the age of 83. Doctor Dixon had moved to Grand Ledge in 1968.

He was a graduate of Wayne State University School of Medicine, had earlier taught school and served 20 years with the Detroit Board of Health before opening private practice.

Doctor Dixon, who also held a PhD degree, had been affiliated with Grace Hospital, Detroit.

William L. Lowrie, MD
Birmingham

William Lyon Lowrie, MD, senior consultant in medicine and former head of the metabolic

(Continued on Page 273)

Eligibility:

Entitlement for hospitalization is limited to veterans. Priority is given for treatment of conditions incurred or aggravated in military service. Treatment for conditions which are not service-connected are limited to veterans honorably discharged and who have served in the military forces during a period of war, providing further that such veterans are unable to pay for necessary care.

Entitlement for outpatient care is limited to treatment of veterans for service-connected conditions.

Application:

— For admission should be made to the Veterans Administration Hospital nearest the home of the veteran, and may be made by mail, in person, or in the event of emergency, by telephone call from the physician attending the patient.

— For outpatient care should be made direct to the Outptaient Clinic, Veterans Administration Hospital, Allen Park, Michigan, either by mail or in person.

Additional Information:

Any inquiries or requests for additional information about hospitalization may be directed to the nearest Veterans Administration Hospital.

Gone with the wind

The gas/acid group of disorders

"The two most common complaints referable to the upper gastrointestinal tract for which patients seek medical relief are hyperacidity and 'gas.' The two often occur together."*

Frees captured gas...neutralizes free acid

SILAIN-GEL Tablets and Liquid are separate formulas designed to provide equivalent dual-action symptomatic relief. Both dosage forms contain simethicone which effectively frees trapped gas, enabling the patient to eliminate it. Magnesium hydroxide in both assures a rapid rise in pH for prompt relief of hyperacidity. The special co-dried aluminum hydroxide/magnesium carbonate gel in the tablets assures the same rapid and uniform reaction rate as the liquid. Thus, both medications achieve prompt and prolonged neutralization of free acid *plus* prompt relief from the pain and pressure of trapped gas.

Always in good taste

The pleasant, distinctive flavor of SILAIN-GEL, as well as its non-constipating feature, make it a therapy your patients can live with—in comfort and without complaint.

Select the form of SILAIN-GEL you want to provide symptomatic relief in: gastric ulcer • duodenal ulcer • heartburn • gastric hyperacidity • gastritis • dyspepsia

when the patient prefers the convenience of a tablet, select

Silain-Gel® Tablets:

when the patient prefers a liquid, select

Silain-Gel® Liquid

Also available for the patient who needs an antifrothicant/antiflatulent agent only: **Silain®** (simethicone) Tablets

*Slanger, A.: Med. Times *94*:150 (Feb.) 1966.

Announcing the "Antgasid"

Silain-Gel®

Tablets: simethicone plus aluminum hydroxide/magnesium carbonate co-dried gel and magnesium hydroxide
Liquid: simethicone plus aluminum hydroxide and magnesium hydroxide

one dose does both: frees captured gas...neutralizes free acid

A·H·ROBINS A.H. Robins Company, Richmond, Virginia 23220

sterile solution (300 mg per ml.)

Consider Lincocin®

(lincomycin hydrochloride, Upjohn)

2cc. Sterile Solution No. 8055
Lincocin®
(lincomycin hydrochloride
injection)
No. 8049
Vial Sterile Solution
Lincocin®
(lincomycin
hydrochloride injection)
to 300 mg. per cc.
Upjohn
3 Gm. per 10 cc.
Federal law prohibit
without prescription.
EXPIRES

For your convenience
in 2 ml. and 10 ml. vials…

and single-dose 2
disposable syringe

©1970 by The Upjohn Company [illegible]

Upjohn THE UPJOHN COMPANY
KALAMAZOO, MICHIGAN

once-popular treatment for back pains
as to have the seventh son of a seventh son
and or walk on the patient's back.

The pain of earache was allegedly relieved by holding a hot roasted onion to the ear.

or headache, a sovereign remedy was
wear a snakeskin round one's head.

A realistic approach to pain relief

Empirin'®

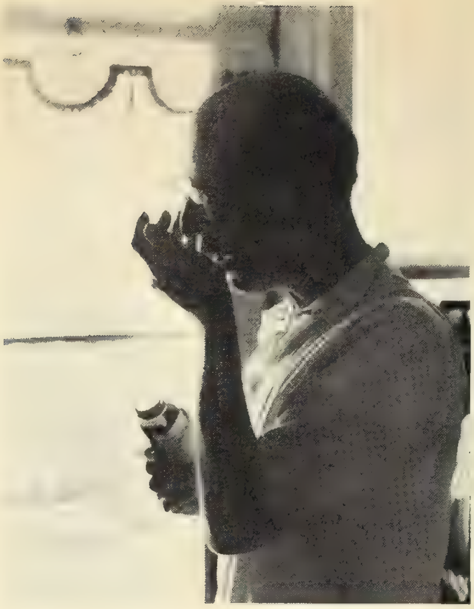
Compound with Codeine Phosphate gr. 1/2 No. 3

ach tablet contains:
Codeine Phosphate gr. 1/2 (Warning—
May be habit forming), Phenacetin gr. 2 1/2,
Aspirin gr. 3 1/2, Caffeine gr. 1/2.

keeps the promise of pain relief

.W. & Co.' narcotic products are
lass "B", and as such are available on oral
rescription, where State law permits.

BURROUGHS WELLCOME & CO. (U.S.A.) INC.
Tuckahoe, N.Y.



Multivitamins with pyridoxine can impair levodopa therapy

Your patient with Parkinson's disease and syndrome may be taking a nonprescription multivitamin containing B_6.
Vitamin B_6 reportedly reduces the benefits of levodopa, and may lead to discontinuance of therapy because of apparent ineffectiveness.

Larobec provides needed nutritional support without pyridoxine (vitamin B_6)...and helps ensure that your levodopa therapy is not impaired by self-medication with a pyridoxine-containing multivitamin preparation.

Complete Prescribing Information:
Each Larobec tablet contains:

Thiamine mononitrate (vitamin B_1)	15 mg
Riboflavin (vitamin B_2)	15 mg
Niacinamide	100 mg
Calcium pantothenate	20 mg
Cyanocobalamin (vitamin B_{12})	5 mcg
Folic acid	0.5 mg
Ascorbic acid (vitamin C)	500 mg

Description: For prophylactic or therapeutic nutritional supplementation concomitant with levodopa therapy in patients with Parkinson's disease and syndrome, Larobec provides high potency dosages of the major B-complex vitamins, without pyridoxine (vitamin B_6) which has been reported[1,2] to reduce the clinical benefits of levodopa therapy. B-complex vitamins are essential in the anabolism of carbohydrate and protein and in hematopoiesis. Larobec also contains therapeutic quantities of ascorbic acid, a substance involved in intracellular reactions such as tissue repair and collagen formation.
Indications: Larobec is indicated for supportive nutritional supplementation when a water-soluble vitamin formula (without pyridoxine) is required prophylactically or therapeutically in patients under treatment with levodopa.
Warning: Administration of vitamin B_6 may be required if signs of pyridoxine deficiency develop. Larobec is not intended for treatment of pernicious anemia or other primary or secondary anemias. Neurologic involvement may develop or progress, despite temporary remission of anemia, in patients with pernicious anemia who receive more than 0.1 mg of folic acid per day and who are inadequately treated with vitamin B_{12}.
Dosage and Administration: One or two tablets daily, as indicated by clinical need.
How Supplied: Orange-colored, capsule-shaped tablets, imprinted Roche 73; bottles of 100.
References:
1. Duvoisin, R. C., *et al.*: *Trans. Amer. Neurol. Assoc., 94*:81, 1969. 2. Cotzias, G. C.: *J.A.M.A., 210*:1255, 1969.

The "incomplete" B-complex

LarobecT.M.
TABLETS

High-potency nutritional support under prescription control

ROCHE
Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, N.J. 07110

The girth control pill

Tepanil® Ten-tab®

(continuous release form)

(diethylpropion hydrochloride, N.F.)

works on the appetite not on the 'nerves'

When girth gets out of control, TEPANIL can provide sound support for the weight control program you recommend. TEPANIL reduces the appetite—patients enjoy food but eat less. Weight loss is significant—gradual—yet there is a relatively low incidence of CNS stimulation.

Contraindications: Concurrently with MAO inhibitors, in patients hypersensitive to this drug; in emotionally unstable patients susceptible to drug abuse.

Warning: Although generally safer than the amphetamines, use with great caution in patients with severe hypertension or severe cardiovascular disease. Do not use during first trimester of pregnancy unless potential benefits outweigh potential risks.

Adverse Reactions: Rarely severe enough to require discontinuation of therapy, unpleasant symptoms with diethylpropion hydrochloride have been reported to occur in relatively low incidence. As is characteristic of sympathomimetic agents, it may occasionally cause *CNS effects* such as insomnia, nervousness, dizziness, anxiety, and jitteriness. In contrast, CNS depression has been reported. In a few epileptics an increase in convulsive episodes has been reported. Sympathomimetic *cardiovascular effects* reported include ones such as tachycardia, precordial pain, arrhythmia, palpitation, and increased blood pressure. One published report described T-wave changes in the ECG of a healthy young male after ingestion of diethylpropion hydrochloride; this was an isolated experience, which has not been reported by others. *Allergic phenomena* reported include such conditions as rash, urticaria, ecchymosis, and erythema. *Gastrointestinal effects* such as diarrhea, constipation, nausea, vomiting, and abdominal discomfort have been reported. Specific reports on the hematopoietic system include two each of bone marrow depression, agranulocytosis, and leukopenia. A variety of miscellaneous adverse reactions have been reported by physicians. These include complaints such as dry mouth, headache, dyspnea, menstrual upset, hair loss, muscle pain, decreased libido, dysuria, and polyuria.

Convenience of two dosage forms: TEPANIL Ten-tab tablets: One 75 mg. tablet daily, swallowed whole, in midmorning (10 a.m.); TEPANIL: One 25 mg. tablet three times daily, one hour before meals. If desired, an additional tablet may be given in midevening to overcome night hunger. Use in children under 12 years of age is not recommended.

T-103 / 2/71 / U.S. PATENT NO. 3,001,910

THE NATIONAL DRUG COMPANY
DIVISION OF RICHARDSON-MERRELL INC.
PHILADELPHIA, PENNSYLVANIA 19144

Painful night leg cramps...

unwelcome bedfellow for any patient—including those with arthritis, diabetes or PVD

One thing patients can sleep without, particularly patients with chronic disease conditions such as arthritis, diabetes or PVD, is painful night leg cramps. Although seldom the presenting complaint, night leg cramps can tie your patients up in painful knots. Now, just one tablet of QUINAMM at bedtime can usually bring an end to shattered sleep and needless suffering. Your patients will sleep restfully—gratefully—with QUINAMM, specific therapy to prevent painful night leg cramps.

Prescribing Information—Composition: Each white, beveled, compressed tablet contains: Quinine sulfate, 260 mg., Aminophylline, 195 mg. **Indications:** For the prevention and treatment of nocturnal and recumbency leg muscle cramps, including those associated with arthritis, diabetes, varicose veins, thrombophlebitis, arteriosclerosis and static foot deformities. **Contraindications:** QUINAMM is contraindicated in pregnancy because of its quinine content. **Precautions/Adverse Reactions:** Aminophylline may produce intestinal cramps in some instances, and quinine may produce symptoms of cinchonism, such as tinnitus, dizziness, and gastrointestinal disturbance. Discontinue use if ringing in the ears, deafness, skin rash, or visual disturbances occur. **Dosage:** One tablet upon retiring. Where necessary, dosage may be increased to one tablet following the evening meal and one tablet upon retiring. **Supplied:** Bottles of 100 and 500 tablets.

THE NATIONAL DRUG COMPANY
DIVISION OF RICHARDSON-MERRELL INC.
PHILADELPHIA, PENNSYLVANIA 19144

Quinamm™ Specific therapy for night leg cramps

(quinine sulfate 260 mg., aminophylline 195 mg.)

service at Ford Hospital, died Jan. 30 at the age of 75.

Doctor Lowrie was a fellow of the American College of Physicians and past president of the Michigan Diabetes Association. He was graduated from the University of Pennsylvania School of Medicine and was an internist.

Doctor and Mrs. Lowrie were patrons of the Bonstelle and Hillberry theaters at Wayne State University and also of the Detroit Chamber Music Society. Doctor Lowrie was a member of the Endocrine Society, American Diabetes Association, American Geriatrics Society and the World Medical Association.

Gerald Shortz, M.D.
Vero Beach, Fla.

Gerald Shortz, M.D., Detroit anesthesiologist from 1948 to 1956, died Dec. 20 at the age of 62. He was residing in Vero Beach, Fla., at the time.

A graduate of Indiana University Medical School, Doctor Shortz had been affiliated with Harper, Woman's and Jennings hospitals in Detroit. He was a member of the American Society of Anesthesiology.

Elwood A. Sharp, M.D.
Detroit

Elwood Armstrong Sharp, M.D., retired director and founder of the Department of Clinical Investigation at Parke, Davis and Co., died Dec. 31 at the age of 79.

Doctor Sharp was graduated from the University of Kansas Medical School and had retired in 1961 from Parke, Davis. He had been affiliated with Harper, Receiving and Jennings hospitals in Detroit.

Doctor Sharp was a member of the American College of Physicians, American Society of Clinical Pathology, the Endocrine Society, Detroit Physiological Society, Central Society of Clinical Research, the American Military Surgeons and the Royal Society of Medicine.

James R. Stringham, M.D.
Cheboygan

James R. Stringham, M.D., Cheboygan physician for 59 years, died Jan. 22 at the age of 84.

A former chief of staff of Cheboygan Community Memorial Hospital, Doctor Stringham was a graduate of Wayne State University School of Medicine. He was also a registered pharmacist.

Doctor Stringham was Cheboygan city health officer several years and was physician for the Detroit and Mackinac Railroad from 1935 until July, 1970.

Thomas D. Tierney, M.D.
Birmingham

Thomas Dee Tierney, M.D., member of the Board of the Oakland County Medical Society and newly-appointed editor of the *Bulletin* of OCMS, died Jan. 5 at the age of 45.

Doctor Tierney, a graduate of Wayne State University School of Medicine, was affiliated with Detroit Receiving Hospital and Jennings Hospital. He was a psychiatrist.

Doctor Tierney was a member of the Michigan Society of Professional Engineers, the Michigan Association of the Professions and the American Psychiatric Association.

Sylvester W. Trythall, M.D.
Orchard Lake

Sylvester Wayne Trythall, M.D., Detroit-area obstetrician-gynecologist for 35 years, died Dec. 22 at the age of 69.

Doctor Trythall had been chief of obstetrics and gynecology at Crittenton Hospital, Detroit, and

(Continued on Page 275)

THE FINEST NAME IN MEDICAL-DENTAL ARTS

THE DAVID WHITNEY BUILDING

WOODWARD AT GRAND CIRCUS PARK AND WASHINGTON BOULEVARD

IMMEDIATE OCCUPANCY • VARIOUS SIZE SUITES AVAILABLE

THE DAVID WHITNEY BUILDING CONTAINS DETROIT'S FINEST MEDICAL, DENTAL AND X-RAY LABORATORIES PLUS A PHARMACY FOR YOUR CONVENIENCE, LOCATED MINUTES FROM THE NEW DETROIT MEDICAL CENTER. • AUTOMATIC ELEVATORS • BARBER SHOP • SNACK SHOP • BANK • COMPLETE BUILDING SECURITY • FINEST PERSONALIZED JANITORIAL AND MAINTENANCE INCLUDED • ADJACENT TO LARGE PARKING GARAGE • SPECIAL RATES TO NEW DOCTORS

hayman management company 962-3058

Classified Advertising

$5.00 per insertion of 50 words or less, with an additional 10 cents per word in excess of 50.

General Practitioner Retiring: Established southwest Detroit suburban practice. Near hospitals. Modern two suite office building, air conditioned. $35,000.00, including all equipment, supplies, records and practice. Terms available. Will stay to introduce if desired. Contact: Wm. S. Lovas, M.D., 3577 Fort Street, Lincoln Park, Michigan 48146.

PSYCHIATRIC RESIDENCIES: Excellent, approved psychiatric training; both demanding and clinically rich in a stimulating, well-organized program. The setting is a culturally satisfying community; the serene, scenic, Grand Traverse Bay area. Present salaries: 3 year plan ($11,359 - $11,922 - $12,925) ; 5 year plan ($12,945 - $14,950 - $17,393 - $23,198 - $24,409) . Contact Dr. Paul E. Kauffman, Director of Psychiatric Training, Room 165, Traverse City State Hospital, Traverse City, Michigan 49684. An equal opportunity employer.

INTERNIST—Board Certified or eligible. Opening July 1, 1971 to replace one of three associates leaving for local administrative position. Established active practice. House Staff and Medical Student Teaching available if interested. Ann Arbor, Michigan, offers advantages of University Town. Reply Box #2, 120 West Saginaw Street, East Lansing, Michigan 48823.

WANTED: Emergency Room Physician—to serve as House Physician and Employee Health Director in a very modern and progressive 200 bed hospital, excellent benefits and starting salary; hours are 9:00 a.m. to 6:00 p.m. Monday thru Friday, weekends off, must have Michigan license. Located 35 miles south of Detroit and 22 miles north of Toledo in a resort area on Lake Erie. Write or call Wayne Farmer, Administrator, Mercy Hospital, Monroe, Michigan.

GENERAL PRACTITIONERS: Are you interested in bringing up your family in a small community with excellent school systems, churches and city pride? We are centrally located just off US-131 between Grand Rapids and Kalamazoo and in definite need for at least one new doctor. Write: Otsego Chamber of Commerce, Otsego, Michigan 49078.

PSYCHIATRIC RESIDENCY: 1100 bed university affiliated Medical Center. Fully approved three year training program in individual and group therapy, Child psychiatry, psychiatric consultation, medicolegal experience, basic and clinical neurology, dynamic clinical experience and all other essential services. Emphasis on general hospital and out-patient practices. Stipends from $14,000 to $16,000 ($1,000 less for candidates without internship) . For further details and consideration submit your resume to: Dr. Robert Schoback, Director of Psychiatric Training, Henry Ford Hospital, Detroit, Michigan 48202.

University trained board eligible anesthesiologist. Married, 42, Michigan license. Vast experience in all types of anesthetics especially interested in pediatric anesthesia. Also respiratory therapy. Would consider to join well organized group or associate. Fee for Service Minimum 50M. Reply Box #1, 120 W. Saginaw Street, East Lansing, Michigan 48823.

TWO BOARD CERTIFIED PEDIATRICIANS desire board qualified or certified Pediatrician as an associate with subsequent full partnership status. This busy pediatric practice serves an area of 120,000 people in Muskegon, Michigan with two modern community hospitals with active pediatric services located in close proximity to office. Address inquiry to: Howard V. Sanden, M.D., 1643 Peck Street, Muskegon, Michigan 49441.

WANTED: Internist, Obstetrician, Pediatrician, Orthopedist, Generalists, Midland, Texas. Warm, sunny cosmopolitan community, 65,000, highest educational level per capita in country. Easily accessible to ski and mountain resorts. Reply: Martha Madsen, M.D., 2200 West Illinois St., Midland, Texas 79701 (915) 683-3206.

MEDICAL TECHNOLOGISTS, ASCP or eligible needed for expanding clinical laboratory, 460 bed general hospital. Start $693 per month, increases to $900. Paid vacations, insurance and holidays. Write or apply Personnel Department, Edward W. Sparrow Hospital, 1215 E. Michigan Avenue, Lansing, Michigan 48912.

OFFICE SPACE: Grand Haven, Michigan, located on Lake Michigan. A clean progressive city with steady diversified employment, new hospital—the best school system. A fine place to start your practice and raise your family. Office is located in the most convenient and desirable location, to be divided to suit the tenant. Phone (616) 842-6530 or (616) 842-4939 evening. OR WRITE: Beacon Professional Building, Beacon Blvd., Grand Haven, Mi 49417.

FOR SALE: Two new (never used) fully powered, fully equipped Shampaine/Allison examining tables. Also, one microscope (used) . Big Savings! Call (313) 833-0834.

Advertisers in MICHIGAN MEDICINE are friends of the profession. By accepting their advertising we show confidence in them, their services and products. They help make the journal a quality publication. Please familiarize yourself with their services and products and let them know that you see their advertising in MICHIGAN MEDICINE.

was a recipient of a 1965 Distinguished Alumni Award from Northern Michigan University. The award was made for his published research on the prenatal preparation for prematurity and fertility.

In 1961 Doctor Trythall established the Sara Govereaux Trythall Fund for prematurity and fertility at Crittenton. He was graduated from the University of Michigan Medical School and was a fellow of the American College of Surgeons, the American Board of Obstetrics and Gynecology, the American College of Obstetricians and Gynecologists and the American Society of the Study of Sterility.

Howard J. West, MD
Birmingham

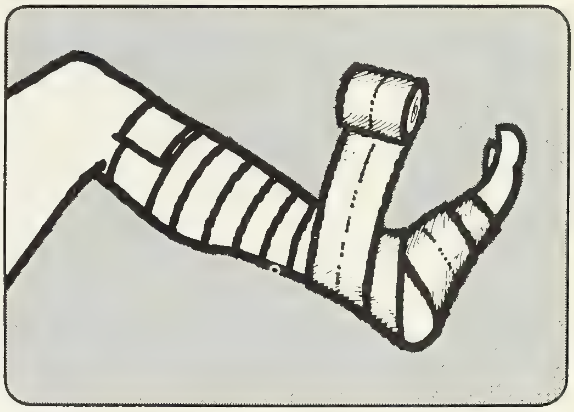
Howard Joseph West, MD, chief of radiation therapy at Mt. Carmel Mercy Hospital, died Jan. 28 at the age of 39.

Doctor West, a graduate of the University of Michigan Medical School, was a former radiologist at Harper Hospital and Children's Hospital of Michigan. A member of the Catholic Physicians Guild and the Michigan Radiological Society, Doctor West also was on the faculty of the Wayne State University School of Medicine.

Index to Advertisers

AMA 246
Arch Laboratories 244
Battle Creek Sanitarium 254
Breon Laboratories 225
Brighton Hospital 227
Bristol Laboratories 190, 228, 229, 252, 253
Brown Pharmaceuticals 264
Burroughs-Wellcome & Co. 269
Campbell Soup Co. 217
Classified Advertising 274
David Whitney Bldg. 273
Fisher Bldg. 237
Fleet, C. B. Co. 276
Flint Laboratories 247, 248, 249, 250
Geigy Pharmaceuticals 188
Hoechst Pharmaceuticals 245
Homemakers, Inc. .... Cover III
Hospital Planning, Inc. 236
Lilly, Eli & Co. 192
Mead Johnson Laboratories 234, 235
Medical Protective Co. 260
Medicenter of America, Inc. 256
Mercywood Hospital 238
Michigan Heart Association 262, 263
Michigan Medical Service 186
National Drug Co. 239, 240, 271, 272
Professional Management 264
Riker Laboratories 258, 259
Robins, A. H. Co. 266, 267
Roche Laboratories .... Cover II, 185, 227, 260, 270, Cover IV
Searle, G. D. & Co. 218, 219
Stratton, Ben P. 255
Stuart Pharmaceuticals 220, 222, 223
Taylor, Edward Ltd. 275
Upjohn Co. 268
Walker Corp. & Co. 230, 231
Warner-Chilcott Laboratories 242, 243
Wayne State University 232

PRIMER®
PLUS
Flexoplast®



A practical, ambulatory treatment for leg ulceration

The Flexible Cast: The PRIMER medicated bandage, in conjunction with the FLEXOPLAST elastic adhesive bandage, comprise the cast.

This is a more comfortable and faster method of healing than Unna's Boot. Frequent changing of the dressing is eliminated. The newly forming granulation and epithelium are left undisturbed. It is the modern form of treatment.

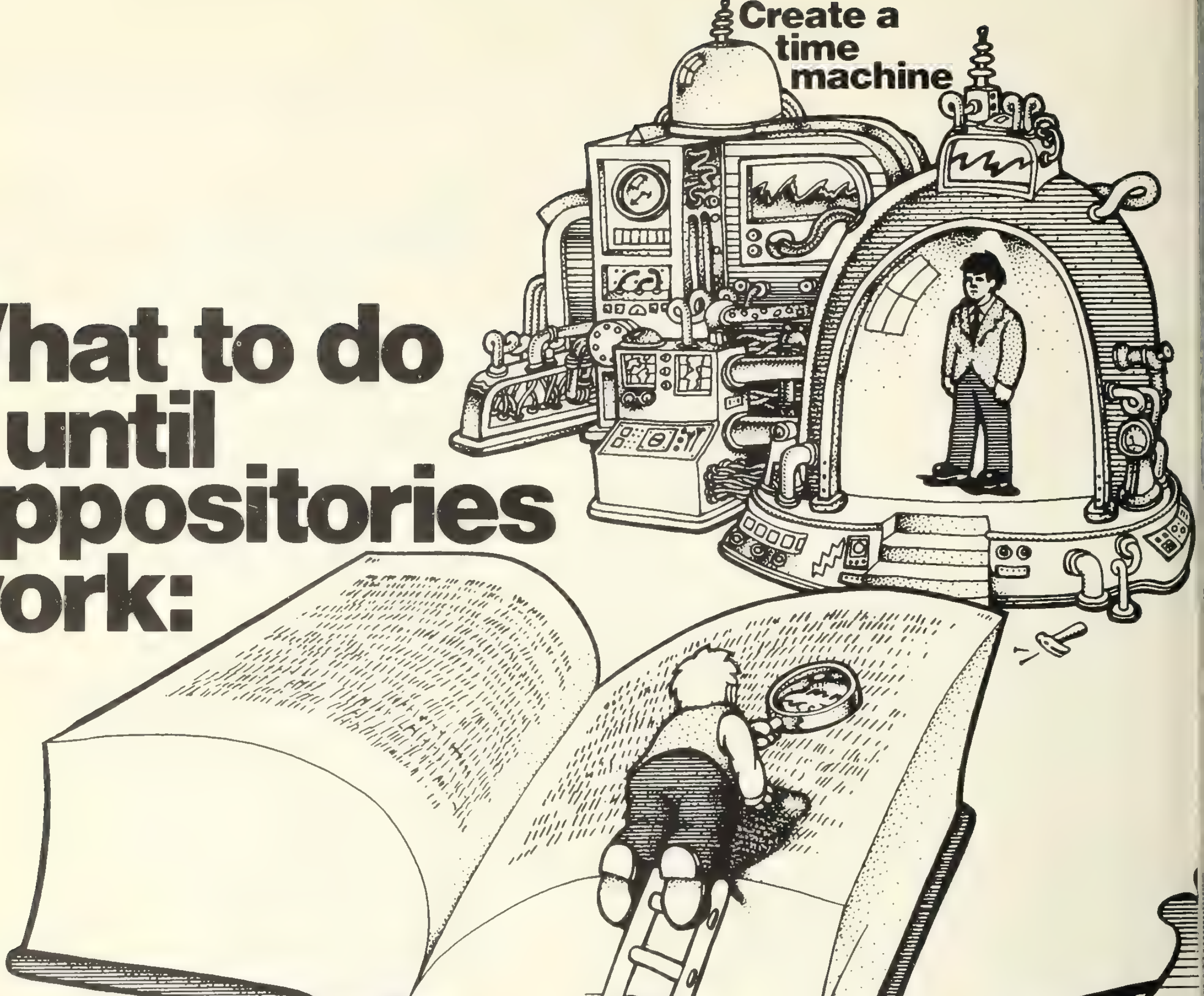
EDWARD TAYLOR Ltd.
A Division of Glenwood Laboratories Inc.
Tenafly, New Jersey 07670

Gentlemen:

Please send me
☐ literature
☐ samples of PRIMER medicated bandage and FLEXOPLAST elastic adhesive bandage.

Name .... M.D.
Address ....
City ....
State .... Zip ....

What to do until suppositories work:

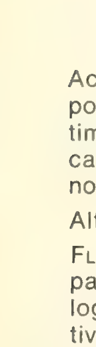


Actually, on the average, evacuant suppositories take about an hour to work.[1-3] Sometimes two.[4] Sometimes more.[3] Also, suppositories can be ineffective in up to 38% of patients,[5] and not infrequently produce smarting, burning and tenesmus.[6]

Alternative to the long unpleasant wait: FLEET® ENEMA.

FLEET ENEMA works within 2 to 5 minutes without pain or spasm. FLEET ENEMA induces a physiological pattern of evacuation, unlike purgatives and laxatives that may liquefy the stool. FLEET ENEMA avoids the irritation common with soapsuds enema. And FLEET ENEMA is leakproof: a rubber diaphragm at the base of the prelubricated tube prevents seepage and controls the rate of flow, assuring comfortable administration.

FLEET ENEMA. Regular and pediatric. Both completely disposable—like suppositories, only better. Much better.



Fleet pharmaceuticals

C. B. FLEET CO., INC
Lynchburg, Va. 24505

Warning: Frequent or prolonged use of enemas may result in dependence. Take only when needed or when prescribed by a physician. Do not use when nausea, vomiting or abdominal pain is present. **Caution:** Do not administer to children under two years of age unless directed by a physician.

References: 1. Blumberg, N.: Med Times 91:45, Jan., 1963. 2. Sweeney, W. J., III: Amer J Obstet Gynec 85:908, Apr. 1, 1963. 3. Weinsaft, P.: J Amer Geriat Soc 12:295, Mar., 1964. 4. Baydoun, A. B.: Amer J Obstet Gynec 85:905, Apr. 1, 1963. 5. Feder, I. A., Flores, A. and Weiss, J.: Amer J Gastroent 33:366, Mar., 1960. 6. Smith, J. J. and Schwartz, E. D.: Western J Surg 72:177, May-June, 1964.

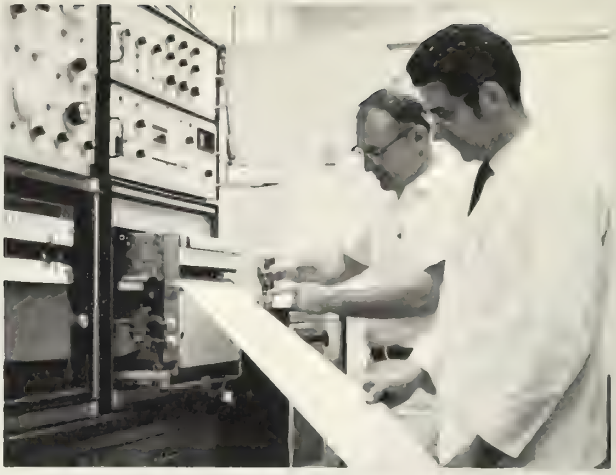
Informal Conversation preceded the first meeting Dec. 30 of representatives of specialty organizations in Michigan. Called by Harold Hiscock, MD, MSMS president, the meeting at MSMS headquarters was the first of several planned between the specialty representatives and Doctor Hiscock, who vowed to work more closely with specialty organizations during his year as MSMS leader.

Approximately 20 specialty organizations were represented at Doctor Hiscock's meeting. Bruce Ambrose, manager of the MSMS Government Relations Department, standing center, talked with, from left, Ralph Green, MD, Oak Park, president-elect, Michigan Society of Psychiatry and Neurology; F. L. Purcell, MD, Ypsilanti, representing the Michigan Industrial Medical Association, and Glenn Moore, MD, Flint, representing the Michigan chapter, American College of Surgeons.

Doctor Hiscock gathers leaders of specialty sections

A pre-meeting conference was held by, from left, John Rowe, MD, Flint, president of the Michigan Society of Internal Medicine; Ross V. Taylor, MD, Jackson, chairman of the MSMS Council, and Warren F. Tryloff, director of MSMS.

Dr. Margaret Greig inspects a rat thymus during her work in investigating various anti-allergy compounds.



Dr. William A. Phillips and Dr. Walter Stafford work with gas chromosomes by which all the various fat systems in the serum can be measured before and after treatment with drugs.

Physicians at Upjohn conduct research in variety of fields

A large force of physicians is at work in Upjohn Company laboratories in Kalamazoo, where they conduct research in a variety of scientific areas. Their investigations eventually lead to an improved health potential for Michigan residents through the upgrading of Upjohn's medical and pharmaceutical products.

(Photos courtesy The Upjohn Company)

Dr. G. J. White does visible absorbance readings on a spectrophotometer to determine chemical structures.

Surgery performed by Dr. Andre Robert is observed by James Nezamis and Paul Phillips. Such surgery is a part of the investigations on gastric ulcers.

Education Liaison Committee discusses many topics

Dean George Mallinson, seated second from the left on the right side of the conference table, explains to the MSMS Education Liaison Committee the developments of the Western Michigan University plans to train physician assistants. Brock E. Brush, MD, of Detroit, second from right, is the Education Liaison chairman this year.

John Wellman, MD, at far right, secretary of the State Board of Registration in Medicine, discussed with the Education Liaison Committee new changes in the licensure requirements for doctors.

Donald McCorvie, MD, center, chairman of the MSMS Committee on Rural Medical Services, is welcomed as a guest at the Education Liaison Committee by two committee members, Joseph R. Cipparone, MD, Lansing, left, and Edward F. Kickham, MD, Saginaw, right.

The Regional Advisory Group in its January meeting discussed the program planning for MARMP during its next three years. Presiding at the meeting was Kenneth Shouldice, PhD, left, president of Lake Superior College at Sault Ste. Marie. Prior to the meeting, he conferred with Albert Huestis, MD, MARMP executive director. Dorothy Carnegie, DO, Lansing is MARMP president.

Doctor Heustis talks over meeting plans with Victor Zink, Detroit, director of The Personnel Research Section of General Motors, one of six public-at-large members on the RAG roster.

The Regional Advisory group of the Michigan Association for Regional Medical Programs welcomed new members at its quarterly meeting early in January. Among the new members are four physicians, D. Bonta Hiscoe, MD, Lansing, replacing Don Marshall, MD, Kalamazoo, retiring MARMP president; Bernard Bercu, MD, Eloise, representing the Kidney Foundation of Michigan; Louis Simoni, MD, Flint, representing the Michigan Academy of General Practice, and George T. Kelleher, MD, Battle Creek, representing the Southwest District on the advisory group.

Michigan Medicine

Breaking News: Deadline, Feb. 22
March 1971, Volume 70, Number 6
Michigan State Medical Society

1971 Maternal Health Conference set April 14-15 in Lansing

Speakers are being arranged, topics selected and final preparations completed for the 1971 Michigan Conference on Maternal and Child Welfare. The dates are Wednesday-Thursday, April 14-15, at the Olds Plaza Hotel, Lansing.

Sponsors of this year's conference for MSMS members, osteopaths, nurses, interns, residents and students are the MSMS; Michigan Foundation for Medical and Health Education, Inc.; Michigan Society of Obstetricians and Gynecologists; Michigan Branch, American Academy of Pediatrics; Michigan Department of Public Health and the Ingham County Medical Society.

The course is acceptable for Category II credit from the American Academy of General Practice.

Darrell E. Statzer, MD, Detroit, is conference chairman. On his committee are John W. Hallitt, MD, Flint; John P. Harm, MD, Detroit; Richard T. Mellis, MD, Kalamazoo, ex officio, and Lee B. Stevenson, MD, Detroit, ex officio.

Major subjects for discussion will be "Our Environment—A Problem for Mother and Physician," and "Effects of Toxic Agents on the Fetus."

Capsules

Appointment of a full-time chief of the new MSMS Bureau of Economic Information is expected by mid-March. Several qualified applicants have been interviewed within recent weeks. In the meantime, Donald Pound, director of health facilities management services with the firm of Danielson, Story, Taylor and Schultz of Lansing, a former MSU professor, is serving as acting chief.

* * *

An editorial in an issue of MICHIGAN MEDICINE has won a first prize in competition sponsored by the Michigan Women's Press Club for Mrs. Willah Weddon of Stockbridge. Mrs. Weddon, wife of Edward Weddon, MD, contributed an article entitled, "Medical Families Can Aid Political Process at Grassroots Level," to the March, 1970, issue of the journal. Mrs. Weddon is a member of the MDPAC board, representing the Woman's Auxiliary to MDPAC.

Wayne State University's Department of Gynecology and Obstetrics and Harper Hospital were sponsors of the annual Harold C. Mack Symposium on Physiology and Pathology of Reproduction held in Detroit. Speakers included from left: Pierre Soupart, MD, associate professor of gynecology and obstetrics, Vanderbilt University; T. N. Evans, MD, acting dean of the Wayne State University School of Medicine and chairman of gynecology and obstetrics; William L. Williams, MD, research professor of biochemistry, University of Georgia; and Benjamin Brackett, MD, assistant research professor of obstetrics and gynecology, University of Pennsylvania. The two-day meeting was devoted to "Biology of Fertilization and Implantation."

A reference folder listing the Michigan colleges and hospitals which provide training for the growing list of health careers is being developed now by the Michigan Health Council and MSMS. It will be available this spring as a supplement to the AMA career pocketbook, "Horizons Unlimited."

* * *

Membership services, legislative activities and other important matters were reviewed by AMA executives at the recent AMA Conference for Medical Society Senior Executives in Chicago. Herb Auer, manager of the Department of Communications and Professional Information represented MSMS.

* * *

The present MSMS health insurance programs for MSMS members are being evaluated currently by a subcommittee of the MSMS Committee on Professional Insurance Plans. A report will be ready for the March 9 meeting of the parent committee.

The reorganization of MSMS staff structure

is discussed inside by Warren F. Tryloff, MSMS director, in a special interview article prepared for this issue. The important phases of the reorganization, along with their impact on the organization and its future, are included. Don't miss it.

Two MSMS surveys of physicians to measure fees, costs

A general mailing to MSMS members is scheduled early in March to try to ascertain the status of physician fees. That mailing will be followed by another in April to try to determine the trends in the overhead cost of medical practice.

The purpose of the surveys, being carried out by the MSMS Bureau of Economic Information, will be to provide individual counties with fee information to be used in the Peer Review process, to provide a basis for dealing with fee escalation criticism, to provide data for individual physicians or groups of physicians involved in negotiations with a third party and to provide overhead cost trend information which can be a "bench mark" to the individual physician in his medical practice.

The survey of overhead cost trends will use test years ending Dec. 31, 1965, and Dec. 31, 1970, while the fee survey will be based on fees actually charged during the year ended Dec. 31, 1970.

Final reports on the surveys were made at the committee's Feb. 10 meeting by Donald Pound, newly-appointed acting chief of the MSMS Bureau of Economic Information. Plans are for the bureau to tabulate the surveys this summer.

Committee chairman Dale L. Kessler, MD, encourages all MSMS members to provide information for the important surveys, authorized by the MSMS House of Delegates.

Highway safety committee makes snowmobile recommendations

Several recommendations have been made by the MSMS Committee on Highway Injury to be considered by The MSMS Council at its March 10 meeting. They include suggestions that MSMS:

1) Endorse and support the Michigan Women for Highway Safety, a new, independent association of Michigan women, led by Mrs. Leota M. Westfall, a specialist in highway traffic safety with Michigan State University.

2) Endorse licensing of snowmobile operators with age restrictions and requirements comparable to those required for operating automobiles, endorse appropriate federal and state legislation limiting the horsepower and speed of snowmobiles, actively support a state-wide public education program utilizing spot announcements on radio and television warning of the hazards of snowmobile operations by unskilled drivers and endorse the distribution of informational pamphlets outlining the dangers of reckless snowmobile driving on the sale of snowmobiles by dealers.

The recommendations were formulated at the Feb. 17 meeting of the MSMS committee.

MSMS House alerts hospitals to medical staff funds guidelines

The guidelines adopted by the MSMS House of Delegates for medical staff funds have been sent to all hospital chiefs of staff.

The resolution was introduced "to provide guidance to MSMS members on the proper implementation of the law and the Principles of Medical Ethics of the AMA."

The guidelines are hereby presented for the information and guidance:

Guidelines for Medical Staff Funds

1. Participation in such Funds shall be completely voluntary.

2. The Board of Directors, Trustees, or other governing body of the Fund shall be limited solely to physicians who are members of the Fund.

3. The Constitution, By-laws or other governing rules of the Fund shall provide that all elections and votes on major decisions by the membership shall be by secret written ballot.

MSMS peer review principals attend regional meeting

The MSMS Committee on Utilization Review and Health Insurance Problems is formalizing its peer review procedures, to present them for the MSMS Council's approval at its March 10 meeting.

The action follows a two-day meeting in Columbus, Ohio, Jan 23-24 attended by the committee chairman, Robert C. Prophater, MD, Bay City; MSMS Director Warren F. Tryloff, and Richard Campau, manager, MSMS Department of Operations and Economics.

The meeting was a regional conference on peer review called by the AMA. On the first day, the representatives of six state medical societies met together, while on the second day, the state medical society representatives met with personnel of Title XIX agencies, Blue Cross, Blue Shield and Health Insurance Councils from the six states and national headquarters.

Discussion covered national legislation and peer review, medical foundations and peer review and a description of the peer review programs of each state medical association.

Eleven to represent MSMS at national AMA-AMPAC workshop

Medical public affairs, medicredit and medical political action will be the emphasis at the AMA-AMPAC Public Affairs Workshop scheduled March 13-14 in Washington, D.C.

Eleven MSMS representatives will be in attendance. They will include Brooker L. Masters, MD, Fremont, and

Michigan physicians are reminded by the AMA of their possible involvement in the national Ambulatory Medical Care Survey being conducted during February and March by the National Center for Health Statistics.

"The AMA urges you to cooperate in this survey form which we expect to obtain data of value to the medical profession in planning and organizing health services, for the efficient utilization of health facilities and manpower, and in determining desirable modification in medical education programs," says Ernest B. Howard, MD, AMA executive vice president.

CAPSULES/Cont.

The Michigan Heart Association will present another three-day meeting in its series on Decision Making in Acute Coronary Care March 10-12 at Holly's Landing in Grand Rapids. The course, presented in cooperation with the Kent County Heart Unit, is approved for prescribed Category I Credit by the AAGP and is co-sponsored by the Michigan Academy of General Practice. Workshops on electrocardiography, arrhythmias, other complications and administration of Coronary Care Units will be included.

* * *

Delano Meriwether, MD, the former Michigan State University premedical student who was graduated from Duke University School of Medicine, is being considered an Olympic prospect after just a month of competing against world class sprinters.

* * *

Two Michigan physicians have been appointed trustees of the Kenny-Michigan Rehabilitation Foundation Board. They are James W. Rae, MD, Ann Arbor, and Joseph N. Schaeffer, MD, Detroit. Doctor Schaeffer is one of the original members of the Kenny medical advisory board and Doctor Schaeffer is chairman of the advisory board.

Coaches and team trainers from hundreds of Michigan high schools and colleges are expected in East Lansing April 22 for the SIXTH ANNUAL CONFERENCE ON THE MEDICAL ASPECTS OF MICHIGAN HIGH SCHOOL SPORTS.

James Feurig, MD, East Lansing, director of the MSU Student Health Services and conference program chairman, urges Michigan physicians to take the initiative to invite their local coaches and athletic trainers to the conference. The MSMS Committee on the Medical Aspects of Organized Athletics is sponsoring the workshop.

Further details will follow in MICHIGAN MEDICINE.

CAPSULES/Cont.

An application for a rehearing was denied Feb. 9 to two Michigan physicians who lost an important malpractice decision in November. The physicians, in the case NACCARATO Vs. GROB AND KREVSKY, were convicted of malpractice in 1959 and 1960 in failing to administer certain tests for PKU and appropriate diet treatment, though the case was decided on standards of practice maintained by physicians in other states. The case was treated in detail in the January issue of MICHIGAN MEDICINE.

* * *

Members of the MSMS Committee on Legal Affairs met informally in a special get-acquainted meeting Wednesday, March 3, with Charles Harmon, Director, Michigan Department of Licensing and Regulations. The meeting included 45 minutes of discussion, followed by dinner.

AMA-AMPAC WORKSHOP/Continued

Robert C. Prophater, MD, Bay City, from the MSMS Council; Bruce W. Ambrose and Sherry L. Hall, MSMS staff; and Michigan Doctors Political Action Committee board members Louis R. Zako, MD, Allen Park; Jack M. Stack, MD, Alma; Thomas Berglund, MD, Portage; Frederick Engstrom, MD, Dearborn; Frank B. Walker, II, MD, Grosse Pointe Park; and Mrs. Willah Weddon, Stockbridge.

Judicial Commission completing ethics study

The MSMS Judicial Commission, after long study and review, expects to have ready for final approval at their April meeting a revised draft of procedures governing the ethics of MSMS members' conduct.

The Commissioners, including new member George M. Wilson, Jr., MD, Marquette, made final revisions in the draft at their Feb. 17 meeting at MSMS Headquarters. They also re-elected Donald N. Sweeny, Jr., MD, Detroit, chairman, and Harold A. Furlong, MD, Pontiac, vice chairman.

Mental health regionalization ideas being studied

The State Mental Health Advisory Council, including four MD-members, is reviewing suggestions for changes in the Michigan Department of Mental Health's proposal for regionalization of mental health services.

More than 50 agencies and individuals have presented either complete plans or suggestions for revisions of the proposal, following a request last September from E. Gordon Yudashkin, MD, director of the MDMH.

The Council will meet as often as necessary to complete its appraisal and make recommendations to the department by July 1. Among the members are Stuart M. Finch, MD, Ann Arbor; Benjamin Jeffries, MD, Harper Woods; George Maniaci, MD, Gladstone, and Edward H. Rodda, MD, Bay City.

MSMS, osteopaths meeting over legislation

Representatives of MSMS and the Michigan Association of Osteopathic Physicians and Surgeons have agreed to meet at MAOPS offices in Farmington March 18 to discuss matters of common legislative interest. They met first in an informal session Feb. 18 at MSMS Headquarters.

Robert C. Prophater, MD, chairman, MSMS Legislative Policy Committee, and Frank J. McDevitt, DO, president, MAOPS, plan monthly meetings during the early portions of the current legislative session.

MSMS representatives were well-received by members of the Capital press corps March 2 at a news conference in the Olds Plaza Hotel in Lansing. Around the table are, from left, Carl Olson, WKAR, Lansing; Herbert A. Auer, manager, MSMS Department of Communications and Professional Information; Robert E. Rice, MD, Greenville, chairman, MSMS Committee on Governmental Medical Care Programs; Joshua S. Williams, MD, Detroit; Al Sandner, DETROIT FREE PRESS, and Millicent Lane, THE STATE JOURNAL, Lansing.

Doctor Williams is interviewed by Walt Sorg, Michigan Radio Network, left, and Ronald Dygert, WJR Lansing Bureau, right, while Mr. Auer of the MSMS staff listens in. Doctor Williams, an inner-city physician, suggested that ways to hold down Medicaid costs might include stronger patient education programs.

State Rep. Earl Nelson of Lansing, second from right, dropped in at the news conference, chatting for a time with, from left, Bruce Ambrose, manager, MSMS Department of Governmental Relations; Richard Wheeler, editor, GONGWER News Service, Inc., and Doctor Rice.

Mike Benner, left, of Lansing radio station WILS, gave Doctor Rice the opportunity to reiterate his morning testimony before the House Subcommittee on Social Services. Doctor Rice, suggesting ways to alleviate the costs of Medicaid, stressed the need for more nursing homes.

MSMS representatives meet the press

The meetings, under the direction of the Department of Government Relations, have included a luncheon with GOP House Leaders, a dinner meeting with Democratic leaders in the House and another meeting with Republican Senate leadership. The final meeting March 24 has been arranged by Democratic Senate leader George Fitzgerald.

Representing MSMS at the meetings have been Director Warren Tryloff; Bruce Ambrose, manager of the Government Relations Department; Robert C. Prophater, MD, chairman, MSMS Legislative Policy Committee, and "Doctors of the Week" Charles Oppy, MD, Roscommon, and John Finger, MD, Saginaw.

OSU professor of surgery to give Beaumont Lecture

Robert Zollinger, MD, professor of surgery at Ohio State University, will be the lecturer for the 50th annual Beaumont Lecture April 5 at the David Whitney House, headquarters of the Wayne County Medical Society.

The lecture at 8:30 p.m. will be preceded by a dinner in Doctor Zollinger's honor at 6:30 p.m. Doctor Zollinger is known for his discovery of an important syndrome, the Zollinger-Ellison syndrome, regarding peptic ulcers. His lecture is entitled "The Influence of Pancreatic Tumors on the Stomach."

The lecture commemorates the pioneer work of the 19th century U.S. Army Surgeon William Beaumont, who made studies on gastric physiology after a French voyageur, Alexis St. Martin, was wounded in the stomach on Mackinac Island in 1822.

Both sides present arguments in U-M intern-resident dispute

The news blackout in the intern-resident dispute at University Hospital, Ann Arbor, is still on. But university officials report a hearing the first week of March in Detroit with the Michigan Employment Relations Commission when both sides presented further arguments.

The commissioners stated at that meeting, that no determination in the dispute over whether the interns and residents can be regarded as a bargaining unit will be reached before a month or six weeks.

The interns and residents have applied to the commission for recognition as a bargaining unit as employees of the hospital. The university regards the interns and residents as students, and not a bargaining unit to be dealt with as a regular labor group.

If the young physicians win their application, they will have to ballot among themselves to determine if their majority wants to be considered a bargaining unit.

If the vote is yes, they will then be free to present a group of demands for better hospital conditions for patients, better pay and fringe benefits for themselves. Those demands were presented by the Intern-Resident Association at a full faculty meeting late in February.

The dispute dates back to December when the Association first presented its claims to the Employment Commission for consideration as a bargaining unit.

Auxiliary's Legislative Day March 23 in Lansing

Members of the Woman's Auxiliary to MSMS have extended personal invitations to their home district legislators to meet with them during the Auxiliary's annual Legislative Day planned March 23 at the Olds Plaza Hotel, Lansing.

The women have been briefed by MSMS Government Relations Department manager Bruce Ambrose on important legislation to discuss with their legislators. They will convene at 9:30 a.m. and will receive greetings from Warren F. Tryloff, MSMS director.

Also on the program are talks in important bills pending in the state legislature, with Francis P. Rhoades, MD, Detroit, member of the MSMS Legal Affairs Committee; talks about AMPAC and MDPAC, with Mrs. E. R. Weddon, Stockbridge, member of the MDPAC board; and about national health insurance, with James Imboden, Columbus, Ohio, AMA field adviser for Kentucky, Ohio, West Virginia and Michigan.

The women will have lunch with their legislators and may tour the Capitol building in the afternoon.

Albion to be spotlighted at Michigan Health Congress

The 25th annual Michigan Health Congress scheduled May 20 in Albion will spotlight the 22-member Albion Drug Committee which has created an outstanding community response to local drug abuse problems.

The all-day congress will begin at 9 a.m. in the Goodrich Chapel at Albion College.

The W. K. Kellogg Foundation of Battle Creek has made a $204,000 grant to the Hospital Services Improvement Program of The University of Michigan to offer and encourage improved hospital management training throughout the state. The program is to bring hospital department heads and supervisors into the college setting through seminars, while at least five other Michigan colleges and universities throughout the state will send industrial engineering, economics and business administration students to hospitals as management interns.

• • •

Clinical pharmacology, with emphasis on newer drugs, is the topic of a postgraduate medical education course planned April 19-21 by the American College of Physicians, at the University of Michigan Towsley Center.

AMA Physicians' Recognition Award credit of 19½ hours will be allowed to those attending the course. A large contingent of U-M physicians will be among the faculty, as well as doctors from Kansas City, Kansas; Toledo, Ohio; Buffalo, N.Y., and Houston, Tex. Director is Edward A. Carr, Jr., MD, director of the Upjohn Center for Clinical Pharmacology.

• • •

The Michigan Office of Comprehensive Health Planning is answering to a new Bureau of Programs and Budget headed by John T. Dempsey and created in February by Gov. William G. Milliken. Gov. Milliken consolidated the former Bureau of the Budget and Bureau of Programs and Policies to form the new bureau.

• • •

AMA President Walter C. Bornemeier, MD, speaking at the 67th annual AMA Congress on Medical Education, said the American medical education system is spending too much time and effort in training doctors to treat hospitalized patients, when a small percentage of illnesses are treated in hospitals. Doctor Bornemeier also suggested a 50 per cent reduction in the number of residents permitted in hospital general surgery programs, because, he said, some specialties, particularly surgery, are taking too many medical school graduates, creating a critical shortage in other areas of medical care.

• • •

Ingham County physicians have been attending a series of eight weekly conferences in clinical pharmacology which began Feb. 18 at E. W. Sparrow Hospital, Lansing. Both MDs and osteopaths are attending the noon hour discussions sponsored by the MSU College of Human Medicine and Continuing Education Service in cooperation with Sparrow Hospital.

• • •

Over 2,000 invitations have been issued to the 11th annual Symposium on Trauma scheduled March 31 from 1 p.m. to 9 p.m. at the Holiday Inn in Muskegon. The symposium is co-sponsored by the Muskegon County Medical Society; Muskegon chapter, American College of Surgeons; the Muskegon County Medical Foundation, and the Michigan Committee on Trauma.

Chairman of the symposium is G. W. Annessa, MD, Muskegon.

Among the speakers are Stanley Dudrick, MD, assistant professor of surgery at the University of Pennsylvania, who will discuss Hyperalimentation in Trauma, and William T. Fitts, Jr., MD, editor of the **Journal of Trauma** and professor of surgery, University of Pennsylvania, whose subject is "Men for the Care of the Injured: Crisis Facing the 70's." Robert Baker, MD, professor of surgery at the University of Illinois, will discuss Sepsis in Trauma.

For Your Assistance

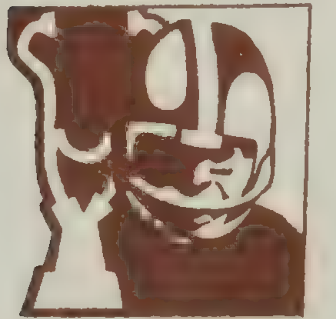
Many Michigan physicians have taken the opportunity to fill out coupons like this one appearing in the monthly News Extras, to order materials from the AMA and MSMS for distribution to patients and for handy reference. Below is a list of more materials the physician may obtain simply by cutting out this coupon and sending it to MSMS in an envelope. Your name and address is on the back so we can easily return the materials to you.

______ **Folder published by AMA for patients: "Health Insurance, Which Plan for You?"**

______ **Article for Physicians, others, by AMA about "What the Health-Care Consumer Should Know About Chiropractic."**

______ **Reprint of the Statement of Principles for Lawyers and Physicians, as revised and adopted by MSMS and the State Bar of Michigan. The statement originally appeared in the January issue of MICHIGAN MEDICINE.**

1971 Conference on Medical Aspects of High School Sports



Thursday, April 22, 1971

Kellogg Center
Michigan State University
East Lansing, Michigan 48823

9 a.m. to 9:30 a.m.

REGISTRATION—registration desk, lobby of Kellogg Center

9:30 a.m. to 10:45 a.m.

"Conditioning Programs for High School Athletics"

Panel discussion

Moderator: Mr. Gayle B. Robinson, Head Trainer, Department of Intercollegiate Athletics, Michigan State University

Participants:

A. *"Conditioning Programs for High School Track Sprinters"*

Mr. James E. Bibbs, Assistant Track Coach, Michigan State University, Coach of Women's Pan-American Track Team 1967

B. *"Conditioning Programs for High School Baseball Pitchers"*

Mr. Daniel W. Litwhiler, Head Baseball Coach, Michigan State University, former National League baseball star

C. *"Conditioning Programs for High School Football Players"*

Mr. Eugene Washington, All American Offensive End Michigan State University 1966, presently all pro wide receiver with Minnesota Vikings Professional Football Team

10:45 a.m. to 11 a.m.

INTERMISSION

11 a.m. to 11:50 a.m.

"Drug Use and Abuse in Athletics"

L. W. Combs, MD, Director Purdue University Student Health Center, Team Physician, Purdue University, West Lafayette, Indiana

Noon to 1:30 p.m.

LUNCHEON in Kellogg Center

Luncheon speaker: Mr. "Bo" Schembechler, Head Football Coach, University of Michigan, Football Coach of the Year 1969

"The Coach and His Personal Physical Condition" or "Coaches Are Mere Mortals—None of Them Can Walk on Water"

1:30 p.m. to 2:30 p.m.

"Women and Competitive Athletics"

Jean Anderson, PhD, Assistant Professor, Health, Physical Education & Recreation, Michigan State University, East Lansing, Michigan

Miss Carol Davis, Assistant Professor, Health, Physical Education & Recreation, Michigan State University, East Lansing, Michigan

2:30 p.m. to 2:45 p.m.

INTERMISSION

2:45 p.m. to 3:45 p.m.

"Cardio-Pulmonary Resuscitation"

L. W. Combs, MD

REGISTRATION FORM

Return to: MEDICAL ASPECTS OF HIGH SCHOOL SPORTS
Continuing Education Service
Kellogg Center
Michigan State University
East Lansing, Mich. 48823

NAME ______________________________

ADDRESS ______________________________

CITY ____________________ COUNTY ______________

STATE ____________________ ZIP ______________

Please register me for the conference on April 22. A total charge of $6.50, $3.15 for luncheon and $3.35 for registration, will be charged.

Maternal health conference April 14-15 in Lansing

BY LEONARDO DA VINCI

Interested physicians wishing to register for the Maternal Health Conference may contact MSMS Headquarters, 120 W. Saginaw St., East Lansing 48823 (517-337-1351).

"A Healthier Mother and Child" is the theme of the 10th Annual Michigan Conference on Maternal and Perinatal Health scheduled April 14-15 at the Olds Plaza hotel, Lansing. The final program has been completed and is presented below. Darrell E. Statzer, MD, Detroit, conference chairman, expects a large turnout of interested physicians, nurses, interns, residents and students for the major event on the MSMS calendar.

Wednesday, April 14, 1 p.m.

"Our Environment—A Problem for Mother and Physician"

Environment—William E. Cooper, PhD

Don't Just Sit There and Listen Like That; The Life You Invent May Be Your Own!—Spencer W. Havlick, MA, PhD, Ann Arbor

The Physician's Role—Robert A. Hatcher, MD, Atlanta, Ga.

Wednesday Evening, 7 p.m.

"Beyond Family Planning"

George J. Langmyhr, MD, medical director, Planned Parenthood-World Populations, New York City

Thursday, April 15, 9 a.m.

"Effects of Toxic Agents on the Fetus"

Drugs During the Perinatal Period—Sanford N. Cohen, MD, New York City

Energy Homeostasis in the Newborn—Thomas A. Helmrath, MD, East Lansing

Radiation and Human Development: Molecular Lesions, Mutations and Malformations—James E. Trosko, PhD, East Lansing

Michigan Medicine

MICHIGAN STATE MEDICAL SOCIETY

Published semi monthly, Trimonthly in December and January, 26 issues, by the Michigan State Medical Society as its official journal Second class postage paid at East Lansing, Mich. and at additional mailing offices. Yearly subscription rate, $9.00. Printed in USA All communications should be addressed to the Publications Committee, Michigan State Medical Society, 120 West Saginaw Street, East Lansing, Michigan 48823 © 1971 Michigan State Medical Society. Phone: Area Code 517, 337-1351

Second Class Postage Paid at East Lansing, Mich. and at additional mailing offices.

UNIVERSITY OF CAL
LIBRARY SCH OF MED
THIRD & PARNASSUS AVE
SAN FRANCISCO CAL 94122

Attention Librarians: This publication is a regular issue of MICHIGAN MEDICINE and should be saved for binding later with the larger scientific issues of the journal.

U. C.
APR 13

Michigan Medicine

News Extra: Deadline, March 11
March 1971, Volume 70, Number
Michigan State Medical Society

MSMS members present doctors' views on Medicaid cut

The *Detroit News* headlined its article: "Medicaid pay is not enough, doctors say." The *Lansing State Journal* banner, on page one, reads "Doctors' Problem: First-Rate Care for Cut-Rate Prices."

The stories that followed the headlines were part of the excellent coverage of the doctors' side of the issue that followed a noon news conference March 2 at the Olds Plaza Hotel in downtown Lansing.

Reporters and cameramen from nine newspapers, TV and radio stations met for lunch and an informal interview session with Robert Rice, MD, Greenville, chairman, MSMS Committee on Governmental Health Care Programs, and Joshua S. Williams, MD, Detroit inner-city family physician.

Doctors Rice and Williams had just completed morning testimony at the Capitol building before the Michigan House Appropriations Committee's Subcommittee on Social Services, on possible ways to achieve some economies in the state Medicaid program.

The two doctors testified following an announcement by Gov. Milliken that he was saving $400,000 in Medicaid expenses through a 10 per cent reduction in payments for physicians' services from March 1 through June 30.

The two physicians offered 12 suggestions to improve health care for the medically-indigent. Doctor Rice stressed the need for more nursing homes. Doctor Williams recommended stronger patient education programs by the Medicaid agencies.

The medical society statement presented by Doctors Rice and Williams also pointed out the major problem facing the legislature with the Medicaid program is "too much demand on too few dollars." The MSMS statement asked if the Medicaid program "might be altered to place greater emphasis on preventive programs, health maintenance and ambulatory care, rather than pegged to such a large degree on hospital and nursing home care."

(See related photos, next page)

MSMS sponsoring meetings with legislative leaders

A dinner March 24 for Democratic Senate leaders will conclude a series of meetings between MSMS representatives and Michigan legislative leaders.

(Continued on Page 287)

CAPSULES

The deadline is April 15 for the Board of Registration in Medicine's Federation Licensing Examination (FLEX) to be conducted June 15-17 at a place to be announced. The Board urges residents in training who intend to apply for a license in private practice in Michigan to write the FLEX before the end of their residency training.

Graduates of Canadian and foreign medical schools must submit their applications also by April 15 for the next examination in the Basic Sciences, scheduled May 14-15. Application for the basic science examination should be directed to the Michigan State Board of Examiners in the Basic Sciences, and applications for the June FLEX examination with the State Board of Registration in Medicine The address for both is 1033 S Washington Ave., Lansing, 48926.

. . .

County medical society executives fought snowy roads to be at MSMS Headquarters Monday, March 8, for a luncheon and afternoon workshop. The occasion was provided to enable the executives to ask questions of MSMS staff members about peer review, medical foundations, legislation, the new MSMS Bureau of Economic Information, insurance programs and group travel plans.

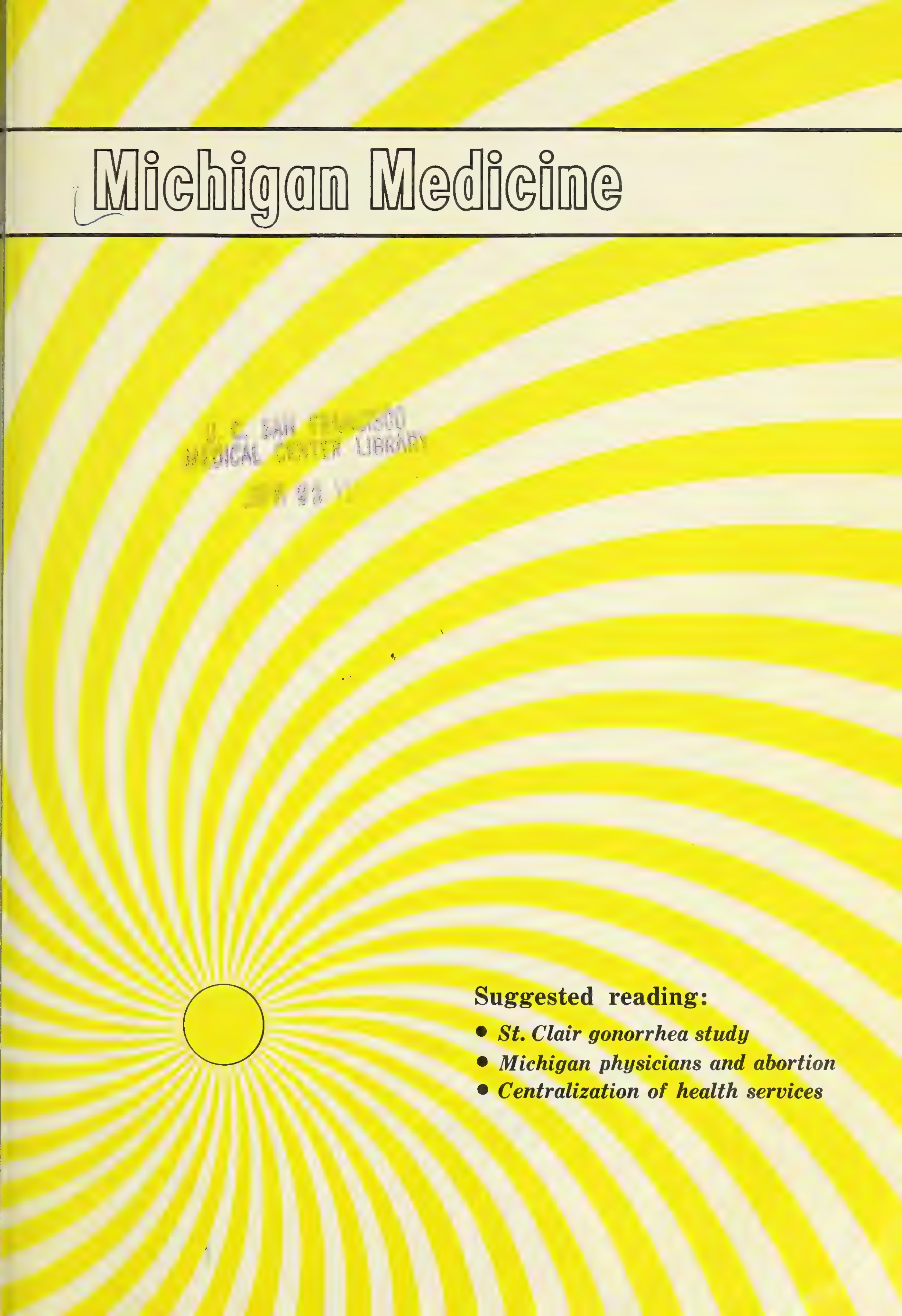
. . .

A shipment of 1,000 copies of "Horizons Unlimited," the AMA publication promoting the health careers for interested young adults, has just arrived at the Wayne State University School of Medicine.

The booklets will be distributed to the many high school students who tour the School of Medicine with their science teachers. Some 300-400 students have taken the tour since September

Michigan Medicine

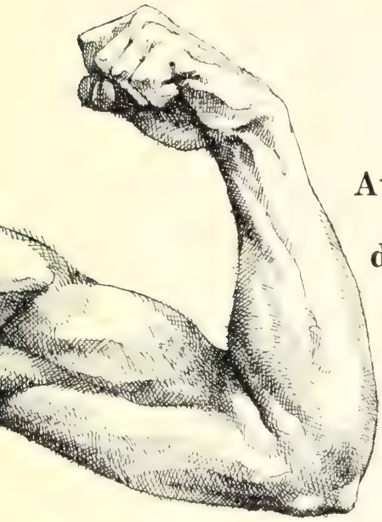
U. C. SAN FRANCISCO
MEDICAL CENTER LIBRARY
[illegible] 23 [illegible]



Suggested reading:

- *St. Clair gonorrhea study*
- *Michigan physicians and abortion*
- *Centralization of health services*

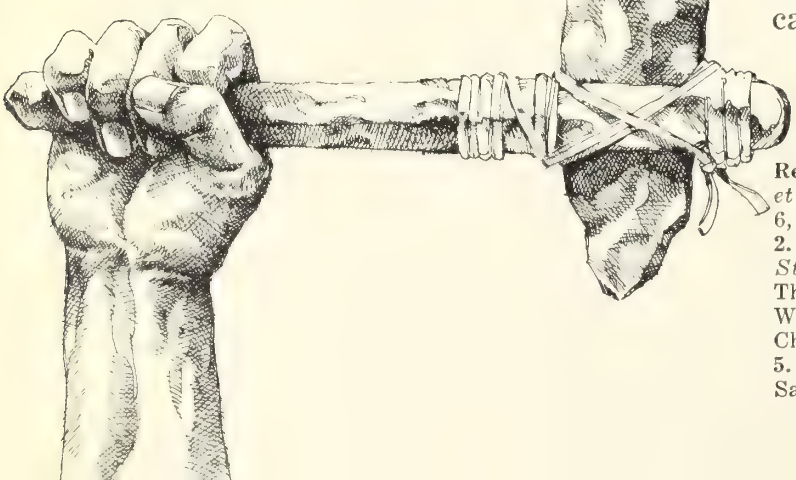
IF MORE MEN CRIE



At least seventy-five out of one hundred adults with duodenal ulcers are men.[1] Why? It may be significant that duodenal ulcer patients tend to crave recognition and are "especially vulnerable to threats to their manly assertive independence."[2]

Hypersecretion—an atavistic response. Stewart Wolf, who, with Harold G. Wolff, studied the personalities of duodenal ulcer patients, wonders if masculine competitiveness is related to "an atavistic urge to devour an adversary." It is striking, he reports, that an accentuation of gastric acid secretion and motility can be "induced in ulcer patients by discussions that arouse feelings of inadequacy, frustration and resentment."[2]

By chance? A lean, hungry lot. Was the link between emotions and gastric hyperacidity acquired through mutation to serve a purpose? During man's jungle period of evolution, the investigator points out, a male dealt with a foe by killing and devouring it. "It may be more than coincidence," he concludes, that peptic ulcer patients appear to be "a lean, hungry, competitive lot."[3]



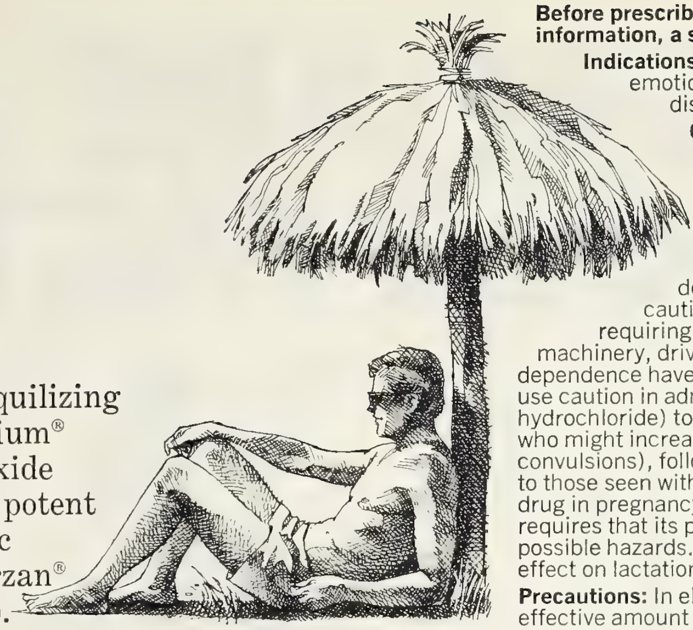
Big boys don't cry. If more men cr maybe fewer would wind up with duode ulcers. But men will be men—the sum tota their genes and what t are taught. Schottsta observes that whe mother admonishes son who has hurt him that big boys don't cry, is teaching h stoicism.[4] Crying is negation of everyth society thinks of as man A boy starts defending manhood at an early a

Take away stre you can take away sympto

There is no question that stress play role in the etiology of duodenal ulc Alvarez[5] observes that many a man with ulcer loses his symptoms the day he shuts the office and starts out on a vacation. T problem is, the type of man likely to have ulcer is the type least likely to take lo vacations or take it easy at work.

The rest cure vs. the two-way action Librax.® For most patients, the rest cure as unrealistic as it is desirable. Still, t stress factor must be dealt with. And he is where the dual action of adjunctive Libr can help. Librax is the only drug that co

References: 1. Silen, W.: "Peptic Ulcer," in Wintrobe, M. *et al.* (eds.): *Harrison's Principles of Internal Medicine,* 6, New York, McGraw-Hill Book Company, 1970, p. 14 **2.** Wolf, S., and Goodell, H. (eds.): *Harold G. Wol Stress and Disease,* ed. 2, Springfield, Ill., Charles Thomas, 1968, pp. 68-69. **3.** *Ibid.,* p. 257. **4.** Schottstae W. W.: *Psychophysiologic Approach in Medical Practi* Chicago, Ill., The Year Book Publishers, Inc., 1960, p. 1 **5.** Alvarez, W. C.: *The Neuroses,* Philadelphia, Pa., W. Saunders Company, 1951, p. 384.



bines the tranquilizing action of Librium® (chlordiazepoxide HCl) with the potent anticholinergic action of Quarzan® (clidinium Br).

Protects man from his own hungry personality. The action of Librium reduces anxiety—helps protect the vulnerable patient from the psychological overreaction to stress that clutches his stomach. At the same time, the action of Quarzan helps quiet the hyperactive gut, decreasing hypermotility and hypersecretion.

An inner healing environment with 1 or 2 capsules, 3 or 4 times daily. Of course, there's more to the treatment of duodenal ulcer than a prescription for Librax. The patient—with your guidance—will have to adjust to a different pattern of living if treatment is to succeed. During this adjustment period, 1 or 2 capsules of Librax 3 or 4 times daily can help establish a desirable environment for healing.

Librax: It can't change man's nature. But it can usually make it easier for men to cope with the discomfort of stress—both psychic and gastric—that can precipitate and exacerbate duodenal ulcer.

Librax: Rx #60 1 cap. *a.c.* and 2 *h.s.*

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Indicated as adjunctive therapy to control emotional and somatic factors in gastrointestinal disorders.

Contraindications: Patients with glaucoma; prostatic hypertrophy and benign bladder neck obstruction; known hypersensitivity to chlordiazepoxide hydrochloride and/or clidinium bromide.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. As with all CNS-acting drugs, caution patients against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Though physical and psychological dependence have rarely been reported on recommended doses, use caution in administering Librium (chlordiazepoxide hydrochloride) to known addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions), following discontinuation of the drug and similar to those seen with barbiturates, have been reported. Use of any drug in pregnancy, lactation, or in women of childbearing age requires that its potential benefits be weighed against its possible hazards. As with all anticholinergic drugs, an inhibiting effect on lactation may occur.

Precautions: In elderly and debilitated, limit dosage to smallest effective amount to preclude development of ataxia, oversedation or confusion (not more than two capsules per day initially; increase gradually as needed and tolerated). Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (*e.g.*, excitement, stimulation and acute rage) have been reported in psychiatric patients. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.

Adverse Reactions: No side effects or manifestations not seen with either compound alone have been reported with Librax. When chlordiazepoxide hydrochloride is used alone, drowsiness, ataxia and confusion may occur, especially in the elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few instances syncope has been reported. Also encountered are isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent and generally controlled with dosage reduction; changes in EEG patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally with chlordiazepoxide hydrochloride, making periodic blood counts and liver function tests advisable during protracted therapy. Adverse effects reported with Librax are typical of anticholinergic agents, *i.e.*, dryness of mouth, blurring of vision, urinary hesitancy and constipation. Constipation has occurred most often when Librax therapy is combined with other spasmolytics and/or low residue diets.

in the treatment of duodenal ulcer

adjunctive

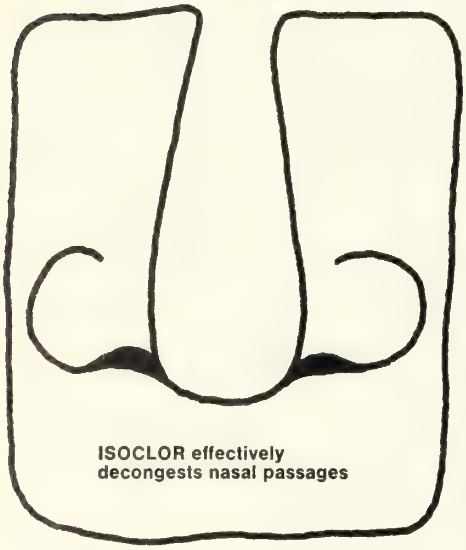
Librax®

Each capsule contains 5 mg chlordiazepoxide HCl and 2.5 mg clidinium Br.

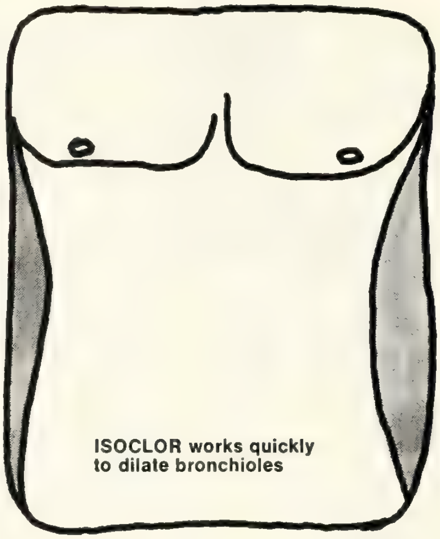
ROCHE

Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, N.J. 07110

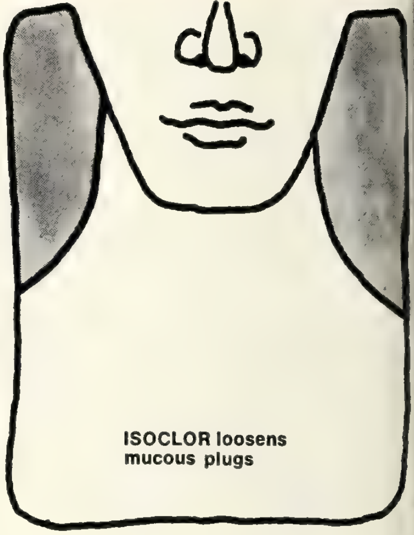
HERE ARE THE COLD FACTS:



ISOCLOR effectively decongests nasal passages

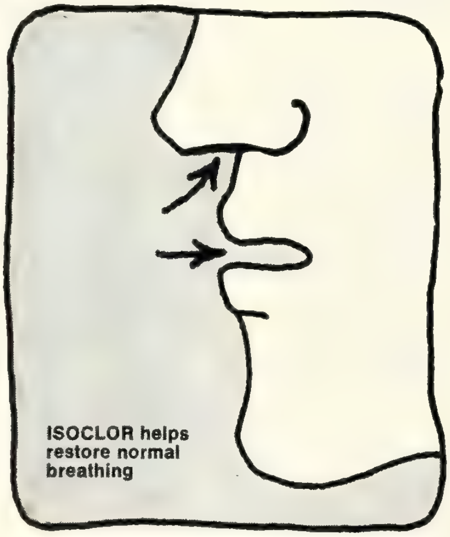


ISOCLOR works quickly to dilate bronchioles



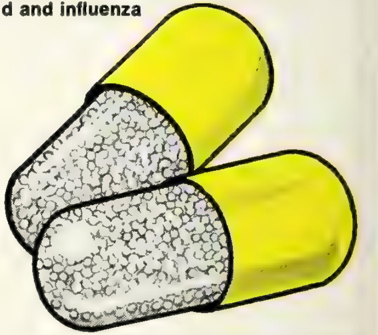
ISOCLOR loosens mucous plugs

ISOCLOR relieves runny eyes



ISOCLOR helps restore normal breathing

ISOCLOR promptly and effectively combats symptomatic miseries of the common cold and influenza



ISOCLOR helps patients face the cold facts

ISOCLOR®

Isoclor provides quick, long lasting relief of respiratory congestion and discomfort brought on by common colds, influenza, and allergies. Isoclor contains chlorpheniramine maleate — one of the most potent and safest antihistamines. And pseudoephedrine HCl — a decongestant bronchodilator providing effective and long lasting relief for the entire respiratory tract. Both work to extend the range of relief.

COMPOSITION: Each tablet or 2 teaspoonfuls of liquid contains:
Chlorpheniramine Maleate . . . . 4 mg.
Pseudoephedrine HCl . . . . 25 mg.

Each ISOCLOR Timesule contains:

Chlorpheniramine Maleate . . . . 10 mg.
Pseudoephedrine HCl . . . . 65 mg.
In a special pellet form providing both prompt and sustained effect.

INDICATIONS: For symptomatic relief of colds, hay fever, allergic conjunctivitis, perennial rhinitis of allergic origin and sinusitis. Opens nasal, sinus and bronchial passages orally.

CONTRAINDICATIONS: Sensitivity to antihistamines or sympathomimetic agents. Severe hypertension or severe cardiac disease.

PRECAUTIONS: Use with caution in patients suffering with hyperthyroidism. Patients susceptible to the soporific effects of chlorpheniramine should be warned against driving or operating machinery should drowsiness occur.

CAUTION: Federal law prohibits dispensing without prescription.

SUPPLIED: Tablets: Bottles of 100 and 1000. Liquid: 4 oz. bottles, pints, and gallons; Timesules: Bottles of 50, 250, and 1000.

DOSAGE AND ADMINISTRATION:	Tablets	Liquid	Timesule
Adults:	1 q. 4 h.	2 tsp. q. 3-4 h.	1 q. 12 h.
Children 6-12 years:		1 tsp. q. 3-4 h.	
40-50 pounds:		¾-1 tsp. q. 3-4 h.	
30-40 pounds:		½-¾ tsp. q. 3-4 h.	
20-30 pounds:		¼-½ tsp. q. 3-4 h.	
15-20 pounds:		⅛-¼ tsp. q. 3-4 h.	

ARNAR-STONE LABORATORIES, INC.
QUALITY—RESEARCH—SERVICE
SUBSIDIARY OF AMERICAN HOSPITAL SUPPLY CORPORATION
Mount Prospect, Illinois 60056

Viewpoints

Congratulations due to Doctor Hiscock on specialty meetings

By James F. Dooley, MD
President
Genesee County Medical Society

(The following article is reprinted, with permission, from the February issue of the Bulletin of the Genesee County Medical Society.)

In an era when organized medicine seems to be lacking in direction, a new approach has recently been instituted in the Michigan State Medical Society. Our President, Dr. Harold Hiscock, called for a meeting of all the specialty groups in the MSMS. This meeting was held early in January in Lansing. The purpose of the special meeting was to allow individual interest groups in the MSMS to voice their opinions about what their particular group believes is most pertinent in medicine today. Multiple and varied views were aired, but to those in attendance it was apparent that many common problems were expressed and the opposing differences were minimal.

The entire meeting was one of investigation as to the feasibility of such a group meeting on a regular basis. When this approach seemed practical to all in attendance, the groups decided that near future meetings would be directed toward organization and prescient in agenda. Each group is expected to nominate a knowledgeable individual to represent that organization for two or three years in order to offer the committee a fair degree of continuity.

It has been postulated that this committee will offer suggestions backed by statistical information upon which The Council of the MSMS might make more definitive decisions. This group meeting, held on a regular basis, would greatly improve the communication between various groups of physicians in MSMS and The Council. Our present organization, calling for an annual meeting of the House of Delegates and a monthly meeting of The Council, is ineffective because it does not allow rapid enough communications between groups, and certainly functions in ignorance of many group opinions.

The House of Delegates is primarily a regional representative body and only represents individual group's interests to the degree that a particular delegate wishes to dedicate himself. In addition, with the exception of special meetings, a delegate or delegation cannot offer continual involvement merely through an annual meeting. The Council, too, is somewhat limited in its ability to control the input of information from special interest groups because its makeup is not dependent upon the branch of medicine its members are involved in. This newly proposed committee of members from all the specialties will unquestionably be able to funnel into our state society the now lacking opinions of all the constituent groups, and these opinions submitted only after the committee has discussed the facts and passed judgment as to their relevance to medicine in Michigan and the general health of the public.

We, as a society, should heartily congratulate Dr. Harold Hiscock.

Let's do our part to provide good care to medically-indigent

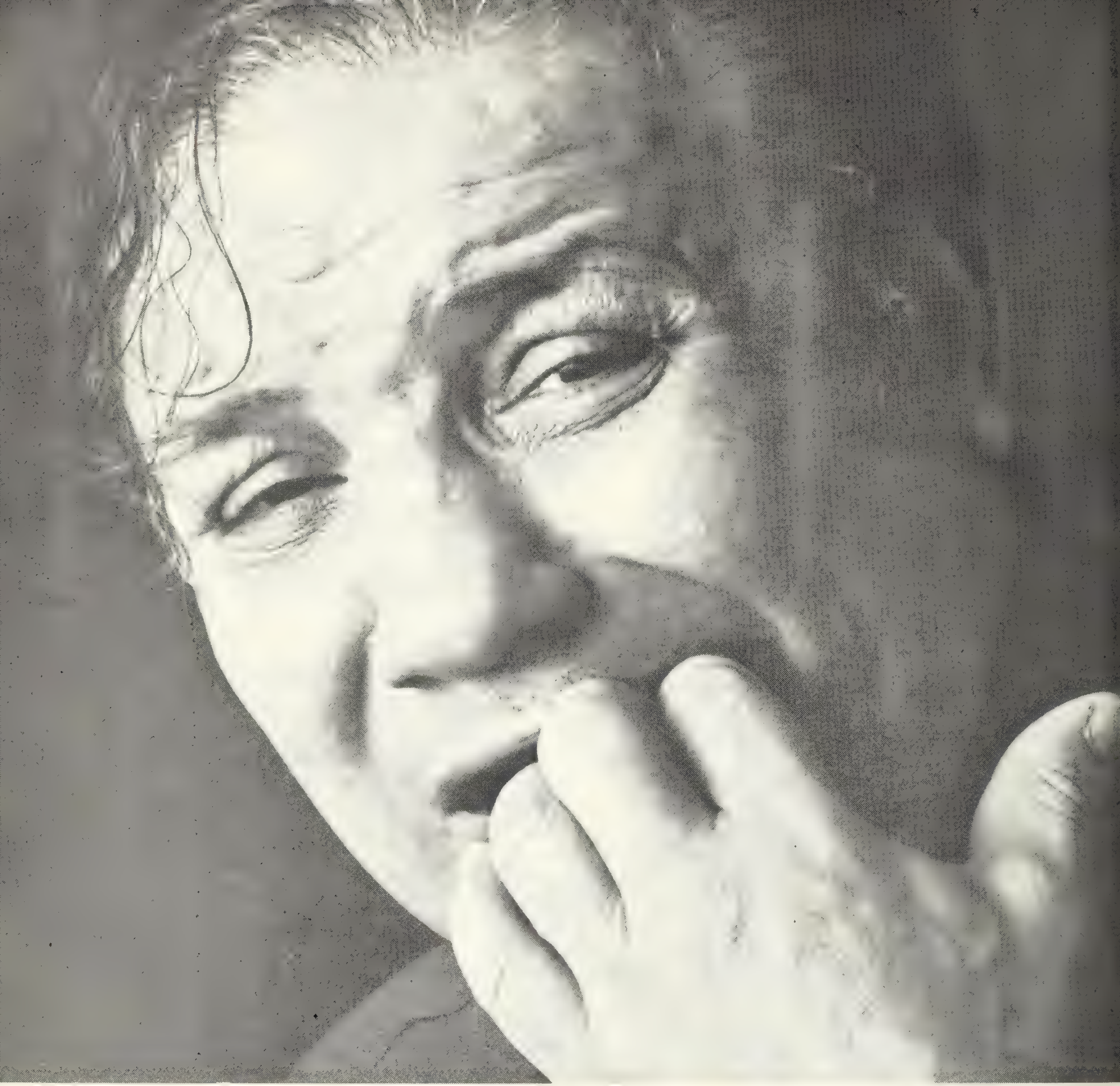
(The Kalamazoo Academy of Medicine in its meeting on the evening of March 16 approved by a substantial margin the concept of a health care center for the north side of Kalamazoo. The following editorial is reprinted, with permission of author and academy bulletin, in support of the center.)

By Roger A. Scholten, MD
President
Kalamazoo Academy of Medicine

The middle of the last decade marked a milestone of sorts in the history of the American Medical Association; a high point in demagoguery and a low point in leadership. Many of you will recall the visit of Dr. Edward R. Annis to Kalamazoo in January of 1965. Dr. Annis was President of the American Medical Association in 1964 and, to the Academy and their wives who gave him a standing ovation, he made the statement "Medicare is a swindle, a political swindle, and a good example of political fraud!" Shortly after his presidency, Dr. Annis showed his true colors when he retired from medical practice to lend his talents to a number of business ventures in which he has generously invited our participation.

In 1966, when Dr. Milford O. Rouse was President Elect of the American Medical Association, he stated that he did not intend to "clutter up" his mind by studying the Medicare law. Dr. Rouse was and presumably is still an active member of the AAPS (Association of American Physicians and Surgeons), a political organization urging non-participation in the Medicare program. De-

(Continued on Page 343)



Who's afraid of the big bad enema?

We all are. But Dulcolax is the cure for enemaphobia It can do almost anything an enema can – except look scary.

Just one suppository usually assures a predictable bowel movement in 15 minutes to an hour. Gone are the tubing, the "accidents", and the bruised egos associated with enemas

For preoperative preparation, the combination of tablets at night and a suppository the next morning usually cleans the bowel thoroughly. Suppositories may also be particularly helpful when straining should be avoided as in postoperative care.

As with any laxative, abdominal cramps are occasionally noted. The drug is contraindicated in the acute surgical abdomen.

Dulcolax®...it's predictable
bisacodyl

Geigy GEIGY PHARMACEUTICALS, DIVISION OF GEIGY CHEMICAL CORPORATION, ARDSLEY, NEW YORK 10502 UNDER LICENSE FROM BOEHRINGER INGELHEIM G. M. B. H.

Michigan Medicine

In This Issue

SCIENTIFIC ARTICLES

301 The Michigan physician: His perception of competence, worries and obsolescence; Floyd C. Mann, PhD; John N. Kotre, PhD; William C. Morris, PhD

309 Attitudes toward Michigan's abortion law and experience of Michigan physicians with requests for abortion; Barbara Serena, MSW, MPH; Patricia Sullivan, BSU, MPH; Jack Stack, MD; Roy Smith, MD, MPH; Johan Eliot, MD, MPH

317 The St. Clair County gonorrhea study: Private and public health resources combine in an effort to control gonorrhea; Robert E. Rowe, MD; Ronaldo S. Balboa, MD

319 The Nephrotic Syndrome: Its spectrum in the adult; William G. Bouman, MD; John M. Weller, MD

SPECIAL ARTICLES

340 Physicians in Michigan by specialty and activity as of Dec. 31, 1969
346 The physician assistant picture; Herbert A. Auer
357 Governmental Health Care Assistance Programs

OTHER FEATURES

293 Viewpoints
297 MSMS Leadership
298 County Societies
307 Monthly Surveillance Report
308 Perinatal Tips
322 Drug Therapy Problems
329 About doctors
332 Michigan authors
336 MSMS News
Michigan Mediscene
337 Council minutes
354 New Members
364 Your opinion please
374 Ancillary
375 In Memoriam
379 Photo Pages
383 Breaking News

MICHIGAN MEDICINE is the official organ of the Michigan State Medical Society, published under the direction of the Publication Committee. Published Semi-Monthly, Trimonthly in January and December; 26 issues, by the Michigan State Medical Society as its official journal. Second class postage paid at East Lansing, Mich. and at additional mailing offices. Yearly subscription rate, $9.00; single copies, 80 cents. Additional postage: Canada, $1.00 per year; Pan-American Union, $2.50 per year; Foreign, $2.50 per year. Printed in USA. All communications relative to manuscripts, advertising, news, exchanges, etc., should be addressed to Judith Marr, Michigan State Medical Society, 120 West Saginaw Street, East Lansing, Michigan 48823. Phone Area Code 517, 337-1351. © 1971 Michigan State Medical Society.

SCIENTIFIC EDITOR
John W. Moses, MD

EXECUTIVE EDITOR
Herbert A. Auer

MANAGING EDITOR
Judith Marr

PUBLICATION COMMITTEE

Robert M. Leitch, MD
Battle Creek
Chairman

Donato F. Sarapo, MD
Adrian

Edward J. Tallant, MD
Detroit

INFORMATION FOR CONTRIBUTORS

1. Address scientific manuscripts to the Publication Committee, Michigan State Medical Society, 120 West Saginaw Street, East Lansing, Michigan 48823. Submit original, double-spaced typewritten copy and two carbon copies or photo copies on letter size (8½ x 11 inch) paper. On page one, include title, authors, degrees, academic titles, and any institutional or other credits.

2. Authors are responsible for all statements, methods, and conclusions. These may or may not be in harmony with the views of the Editorial Staff. It is hoped that authors may have as wide a latitude as space available and general policy will permit. The Publication Committee expressly reserves the right to alter or reject any manuscript, or any contribution, whether solicited or not.

3. Illustrations should be submitted in the form of glossy prints or original sketches from which reproductions will be made by **Michigan Medicine.**

4. Articles should ordinarily be less than four printed pages in length (3000 words).

5. References should conform to *Cumulative Index Medicus,* including, in order: Author, title, journal, volume number, page, and year. Book references should include editors, edition, publisher, and place of publication, as well.

6. The editors welcome, and will consider for publication, letters containing information of interest to Michigan physicians, or presenting constructive comment on current controversial issues. New items and notes are welcome.

7. It is understood that material is submitted for exclusive publication in **Michigan Medicine.**

THE MICHIGAN HEART ASSOCIATION

22ND SCIENTIFIC SESSIONS AND HEART DAYS

April 29 & 30; May 1 Cobo Hall, Detroit

Friday, April 30

Valued by the American Association of General Practice at 11 credit hours

THE FAILING MYOCARDIUM

Designed for practicing clinicians

Clinical Diagnosis and Management of Diseases
Noble O. Fowler, M.D., Director,
Division of Cardiology, University of Cincinnati

WILSON-MYERS LECTURE
Clinical and Laboratory Measures of Myocardial Function
Eugene Braunwald, M.D., Chairman,
Dept. of Medicine, University of California, San Diego

Acute Ventricular Failure—Concepts of Diagnosis and Management
H.J.C. Swan, M.D., Ph.D., F.R.C.P., Chief,
Cardiology, Cedars-Sinai Medical Center, Los Angeles

TREATMENT OF THE FAILING MYOCARDIUM

Digitalis: New Thoughts about an Old Drug
James E. Dougherty, M.D., Professor,
University of Arkansas

Diuretics: Their Use and Abuse
Walter M. Kirkendall, M.D., Director,
Renal-Hypertension-Electrolyte Division, University of Iowa Hospitals

Panel—Acute Congestive Heart Failure **Panel—Chronic Congestive Heart Failure**

Saturday, May 1

ADVANCES IN CARDIAC RHYTHM THERAPY

concurrent sessions

Advances in Cardiac Rhythm Therapy
Electrical Safety in the Hospital
Hyperlipoproteinemias and CVD problems in Renal Insufficiency

This program is valued by the AAGP at 11 credit hours.

Harold E. DePree, M.D., President MHA
Richard D. Judge, B.S.E.E., M.D., Chairman, Program Committee
Abraham Brickner, ACSW, Executive Director

Thursday April 29:

STROKE

Diagnosis and Management of Transient Ischemic Attacks
Diagnosis and Management of Acute Stroke

TREATMENT AND REHABILITATION OF PATIENTS

A five talk symposium
Five special interest concurrent workshops

NOTE: For nurses, a CARDIOVASCULAR PROGRAM, all day Friday, April 30, offers a lecture and concurrent workshops. On Thursday, there will be classes in ECG techniques and Cardiopulmonary Resuscitation; annual meeting of MHA members will be on Friday.

The Headquarters Hotel is the Pontchartrain; make reservations early.

Affiliate: American Heart Association **Member: Michigan United Fund**

MSMS Leadership

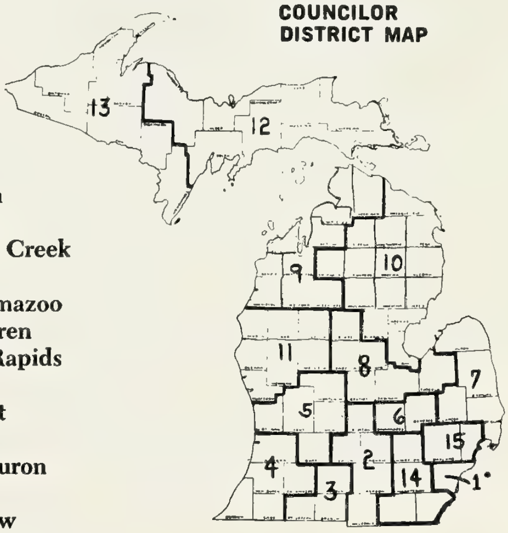
PRESIDENT	Harold H. Hiscock, MD	Flint
PRESIDENT-ELECT	Sidney Adler, MD	Detroit
SECRETARY	Kenneth H. Johnson, MD	Lansing
ASST. SECRETARY	Brooker L. Masters, MD	Fremont
TREASURER	John R. Ylvisaker, MD	Pontiac
ASST. TREASURER	C. Allen Payne, MD	Grand Rapids
SPEAKER	Vernon V. Bass, MD	Saginaw
VICE-SPEAKER	James D. Fryfogle, MD	Detroit
PAST PRESIDENT	Robert J. Mason, MD	Birmingham
COUNCIL CHAIRMAN	Ross V. Taylor, MD	Jackson
VICE-CHAIRMAN	Brooker L. Masters, MD	Fremont

DIRECTOR
Warren F. Tryloff..........East Lansing
GENERAL COUNSEL
Lester P. Dodd..................Detroit
LEGAL COUNSEL
A. Stewart Kerr ....Detroit

ECON. CONSULTANT
Clyde T. Hardwick............Houghton
HISTORIAN
Wm. J. Stapleton, Jr., MD........Detroit
ASS'T HISTORIAN
Wm. M. LeFevre, MD.........Muskegon

SCIENTIFIC EDITOR
John W. Moses, MD.............Detroit

COUNCILOR DISTRICT MAP



First District Councilors: (Wayne County)
Edward J. Tallant, MD, Detroit
Ralph R. Cooper, MD, Detroit
Frank G. Bicknell, MD, Detroit
Milton R. Weed, MD, Grosse Pointe Park
Brock E. Brush, MD, Detroit
Second District Councilor: Ross V. Taylor, MD, Jackson
Counties: Clinton, Eaton, Hillsdale, Ingham, Jackson
Third District Councilor: Robert M. Leitch, MD, Battle Creek
Counties: Branch, Calhoun, St. Joseph
Fourth District Councilor: W. Kaye Locklin, MD, Kalamazoo
Counties: Allegan, Berrien, Cass, Kalamazoo, Van Buren
Fifth District Councilor: Noyes L. Avery, MD, Grand Rapids
Counties: Barry, Ionia-Montcalm, Kent, Ottawa
Sixth District Councilor: Ernest P. Griffin, Jr., MD, Flint
Counties: Genesee, Shiawassee
Seventh District Councilor: John J. Coury, MD, Port Huron
Counties: Huron, Sanilac, Lapeer, St. Clair
Eighth District Councilor: A. Carl Stander, MD, Saginaw
Counties: Gratiot-Isabella-Clare, Midland, Saginaw, Tuscola
Ninth District Councilor: Adam C. McClay, MD, Traverse City
Counties: Grand Traverse-Leelanau-Benzie, Manistee, Northern Michigan (Antrim, Charlevoix, Cheboygan and Emmet combined), Wexford-Missaukee
Tenth District Councilor: Robert C. Prophater, MD, Bay City
Counties: Alpena-Alcona-Presque Isle, Bay-Arenac-Iosco, North Central Counties, (Otsego, Montmorency, Crawford, Oscoda, Roscommon, Ogemaw, Gladwin and Kalkaska, combined)
Eleventh District Councilor: Brooker L. Masters, MD, Fremont
Counties: Mason, Mecosta-Osceola-Lake, Muskegon, Newaygo, Oceana
Twelfth District Councilor: William A. LeMire, Sr., MD, Escanaba
Counties: Chippewa-Mackinac, Delta-Schoolcraft, Luce, Marquette-Alger
Thirteenth District Councilor: Donald T. Anderson, MD, Wakefield
Counties: Dickinson-Iron, Gogebic, Houghton-Baraga-Keweenaw, Menominee, Ontonagon
Fourteenth District Councilor: Donato F. Sarapo, MD, Adrian
Counties: Lenawee, Livingston, Monroe, Washtenaw
Fifteenth District Councilor: Sydney Scher, MD, Mount Clemens
Counties: Macomb, Oakland

County societies

Hospital's merger plans in Bay City fostered by doctors

An action committee of the Bay County Medical Society—11 members strong—has been quietly and successfully at work during the past two years encouraging the merger of the city's two largest hospitals.

A major step toward the eventual construction of a new multi-million dollar hospital complex was taken in December, 1970 with the signing of a joint agreement to merge General and Mercy hospitals in Bay City.

Things are now pretty quiet for the Medical Society's committee, according to Walter Howland, MD, of the committee, as lawyers work out the legal details of the merger.

"But we won't stop work until we have one fine hospital in Bay City," says Doctor Howland.

The committee, chaired in its first year by Frederick E. Brenner, MD, and led this year by Harold Schafer, MD, both of Bay City, has kept up a dialogue with members of the two hospitals' boards and administrative staffs, often inviting board members to committee meetings. The committee's purpose has been to act as a catalyst, continually encouraging further action in the merger.

The committee also has been responsible for the placement of a local physician, Orlen Johnson, MD, on the board of General Hospital to represent medical interests.

"We have good men as chairmen of both boards," said Doctor Howland. "Our committee has tried to work in the background, arousing enthusiasm for the merger."

Merger talk began in 1968 when a volunteer county health planning council commissioned a study of hospital care in Bay City and a merger was recommended. The way has been left clear for the two other Bay City hospitals to join in if they desire.

Macomb physicians' topic—drug addiction

"The Sociological and Physiological Aspects of Addiction" were discussed by Russell Smith, MD, medical director, Maxie School for Boys, Whitmore Lake, and medical director, Guest House Sanitarium, Lake Orion, at the Feb. 16 meeting of the Macomb County Medical Society.

Cass physicians guarantee student loans

Members of the Cass County Medical Society have helped about 15 young local women complete their further education as licensed practical nurses through a loan guarantee fund that has been in existence now for over two years.

The medical society provides the guarantee for the loans which enable the young women to complete a one-year course at Southwestern Michigan College, a two-year school near Dowagiac. Managing the loan program is Aaron K. Warren, MD, Cassopolis, Cass society president.

Bo Schembechler guest of Washtenaw MDs, sons

Bo Schembechler, head football coach for the University of Michigan and NCAA Coach of the Year in 1969, was featured speaker at the Feb. 9 Father-Son banquet of the Washtenaw County Medical Society. He delivered a talk and answered questions from the audience.

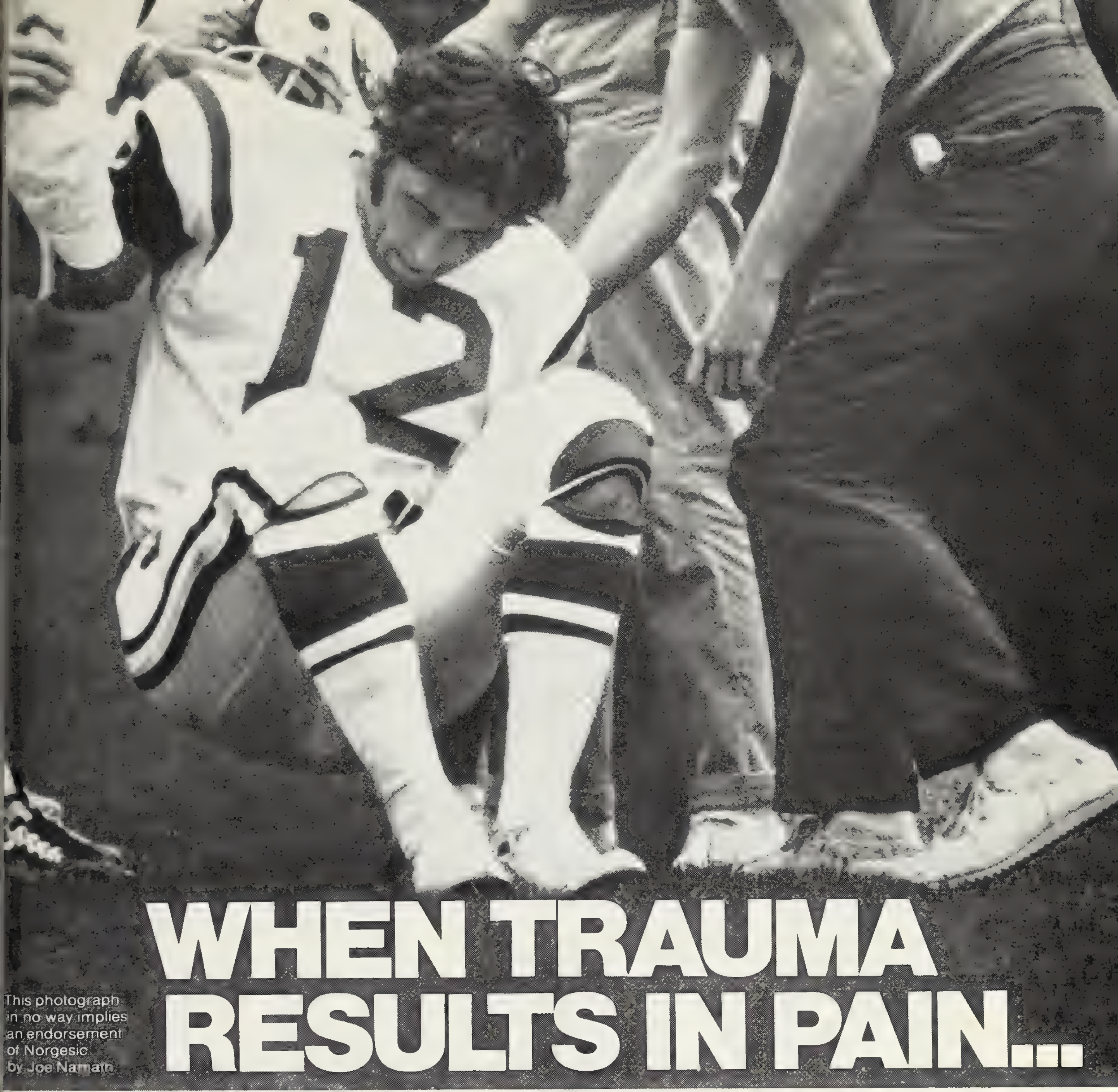
Kalamazoo doctors urged to study own ideas about death

The fear of death is much more a factor in the minds and emotions of those who stand around the dying person than in the being of the dying person himself, Kalamazoo Academy of Medicine members were told at a recent meeting.

Elisabeth Kubler-Ross, MD, director of the Cook County Mental Health and Family Care Clinic, told the academy members that it is important that the terminally ill person be given opportunity to openly discuss the death process and his feelings about it.

Doctor Ross compared the present way of death to the traditions of the past, suggesting that death today is an isolating experience. She strongly advised the physicians of the need to let the experience of death be as natural and with as much support as possible.

Doctor Ross encouraged her listeners to examine their own approaches to the dying patient.


WHEN TRAUMA RESULTS IN PAIN...
This photograph in no way implies an endorsement of Norgesic by Joe Namath

Norgesic . . . provides effective analgesia and relief of associated muscle spasm

Contraindications: Because of the mild anticholinergic effect of orphenadrine, Norgesic should not be used in patients with glaucoma, pyloric or duodenal obstruction, achalasia, prostatic hypertrophy or obstructions at the bladder neck. Norgesic is also contraindicated in patients with myasthenia gravis and in patients known to be sensitive to aspirin, phenacetin or caffeine.
Since mental confusion, anxiety and tremors have been reported in patients receiving orphenadrine and propoxyphene concurrently, it is recommended that Norgesic not be given in combination with propoxyphene (Darvon®).
Warnings: USE IN PREGNANCY: Since safety of the use of this preparation in pregnancy, during lactation, or in the child-bearing age has not been established, use of the drug in such patients requires that the potential benefits of the drug be weighed against its possible hazard to the mother and child.
USE IN CHILDREN: The safe and effective use of this drug in children has not been established; therefore, the physician must weigh the benefits against the potential hazards.
Precautions: It has been reported that prolonged or excessive use of phenacetin may result in nephrotoxicity. Caution, therefore, should be exercised when Norgesic is administered to patients with renal disorders. It should also be used with caution in patients with tachycardia.
Adverse Reactions: Side effects of Norgesic are those seen with APC or those usually associated with mild anticholinergic agents. These may include tachycardia, palpitation, urinary hesitancy or retention, dry mouth, blurred vision, dilatation of the pupil, increased intraocular tension, weakness, nausea, vomiting, headache, dizziness, constipation, drowsiness, and rarely, urticaria and other dermatoses. Infrequently an elderly patient may experience some degree of confusion. Mild central excitation and occasional hallucinations may be observed. These mild side effects can usually be eliminated by reduction in dosage. One case of aplastic anemia associated with the use of Norgesic has been reported. No causal relationship has been established. **Dosage and Administration:** Adults—1 to 2 tablets 3 to 4 times daily.

Riker Laboratories, Inc.
NORTHRIDGE, CALIFORNIA 91324
A SUBSIDIARY OF 3M COMPANY

NORGESIC®
(orphenadrine citrate, 25 mg., aspirin, 225 mg., phenacetin, 160 mg., caffeine, 30 mg.)
the versatile analgesic

Not too little, not too much...
but just right!

"Just right" amounts of Ilosone Liquid 250
can be dispensed easily from the pint bottle in *any* quantity
you specify to meet your patients' precise needs—
without regard to package size.

ready-mixed
Ilosone® Liquid 250
Erythromycin Estolate
(equivalent to 250 mg. of base per 5-ml. teaspoonful)

Additional information available
to the profession on request
Eli Lilly and Company
Indianapolis, Indiana 46206

Lilly

100204

The Michigan physician:

His perception of competence, worries and obsolescence

By Floyd C. Mann, PhD
John N. Kotre, PhD
William C. Morris, PhD
Ann Arbor

(Sixth in a Series)

1. This research was supported by the Michigan Association for Regional Medical Programs Contract Number 69-5-23.

As we enter the final phase of this series on the Michigan physician and his continuing education, it is appropriate to return to the question of what motivational factors are important in his professional life. In earlier articles[1,2] some attention was given to motivation as a prelude to discussions of the physician's present educational activities and his evaluation of those activities.[3,4,5] Before we turn to the physician's impression of potential innovations in continuing education, some further identification needs to be made of the forces that motivate him to be actively concerned in continuing his education. Three such forces are discussed here: feelings of competency or incompetency, bothers and worries, and feelings of obsolescence.

Perceptions of Own Competence

At one point in the questionnaire respondents were presented with a "curve of overall physician effectiveness" (see **Table 1**) and asked to place themselves somewhere on the curve. Physicians' judgments of their own effectiveness in giving medical care were to be made in comparison with other physicians in their specialty. After rating themselves, respondents were asked a second question: where would your colleagues place you on the curve? **Table 1** presents data on respondents' ratings of their own effectiveness. Estimates of how their colleagues would regard them were nearly identical to these self-ratings.

Nearly all respondents considered themselves at least "a little above the average." Ninety-four percent of the medical doctors placed themselves in the top half of physicians in their specialty, and as many as 36 percent thought they were in the upper 10 percent. Although osteopaths thought highly of their ability, they were not quite as confident as medical doctors. Only 28 percent, for example, thought they were in the top 10 percent. Criterion doctors, on the other hand, were more confident about their effectiveness than the general

TABLE 1

28. Where would you place yourself on this curve of overall physician effectiveness in giving medical care in relation to other physicians in your specialty?

	Lower 5% (1)	Lower 10% (2)	Lower 25% (3)	A Little Below the Average (4)	A Little Above the Average (5)	Upper 25% (6)	Upper 10% (7)	Upper 5% (8)	No Response	Mean	N
Medical Doctors	0	0	0	3	25	33	26	10	3	6.14	919
Doctors of Osteopathy	0	0	1	4	31	33	20	8	3	5.91**	183
Doctors' Doctors	0	0	1	0	15	35	34	14	1	6.44**	96
Informal/Formal Consultants	0	0	1	0	11	36	36	13	3	6.48**	89

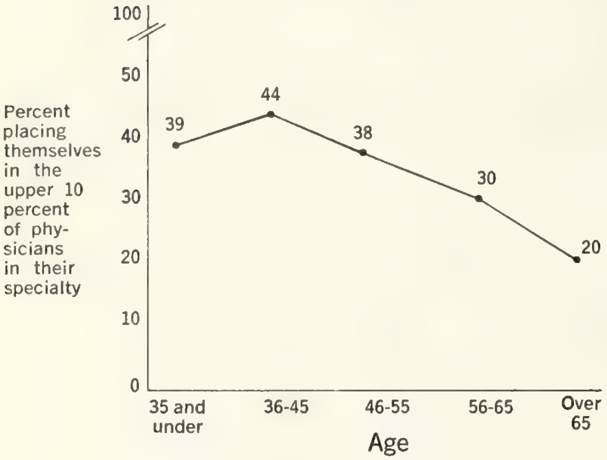
**The mean of this distribution is significantly different from the mean of the medical doctors' distribution at the .01 level (t-test, two-tailed)

The authors are all with the Center for Research on Utilization of Scientific Knowledge, Institute for Social Research, The University of Michigan.

Scientific Papers

Chart 1

Perception of Own Overall Effectiveness by Age for Medical Doctors



sample. As many as 48 percent of the doctors' doctors and 49 percent of the informal/formal consultants thought they were among the best 10 percent of physicians in their specialty.

Differences within the general sample of medical doctors in perceptions of their own competence are instructive. **Chart 1** shows a dramatic relation between age and feelings of effectiveness. Confidence in one's ability starts out high, peaks between 36 and 45, and declines after that point. Only 20 percent of the doctors over 65 compared with 44 percent in the 36-45 bracket, placed themselves in the upper 10 percent of physicians in their specialty.

Among specialty groups, it was surgeons who tended to rate their overall effectiveness as physicians most highly (**Chart 2**). Forty-eight percent placed themselves in the upper 10 percent of doctors in their specialty. General practitioners and pediatricians, on the other hand, tended to rate themselves less highly than other specialty groups rated themselves.

It was also found that doctors at large hospitals were more assured of their ability than those at small hospitals. Forty-nine percent of those at hospitals of 600 or more beds placed themselves in the upper 10 percent of physicians, while only 31 percent of those at hospitals of 100 or fewer beds did likewise. Doctors who practiced in the southeast region of the state (where most of the large hospitals are located) were also more confident than others of their overall competence as physicians.

It is worth noting here that while some of the questions asked in this study of physicians have been asked of other professionals, this particular question has not been used before. We do not therefore have any information about how other professionals would place themselves on a curve of overall effectiveness.

The present findings regarding physicians are reassuring in some ways and disturbing in others. When we chose to present this question about effectiveness in a form suggesting a normal distribution of competence, we expected that physicians would array themselves along more of the continuum than they actually did. That nearly all physicians believed they were average or above suggests that self confidence may be an essential ingredient for the practicing physician. This interpretation is supported by the fact that, in general, few of the physicians admitted to much of a difference between how they evaluate themselves and how others evaluate them. The findings demonstrating that the doctors' doctors and the informal/

Chart 2

Perception of Own Overall Effectiveness by Specialty for Medical Doctors

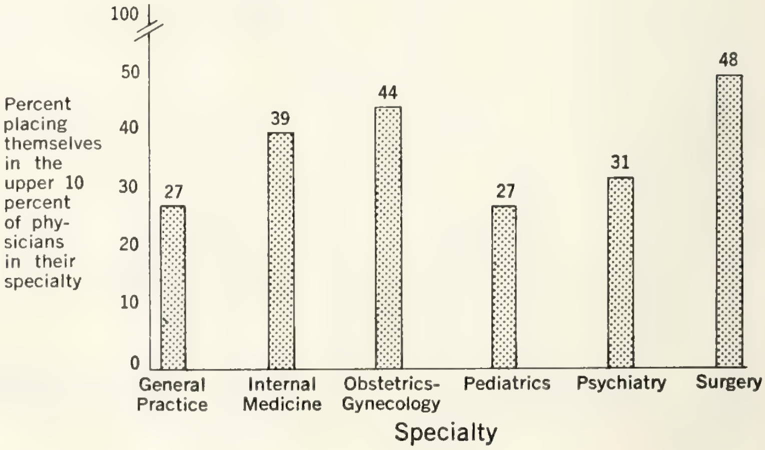


TABLE 2

29. To what extent are you bothered or worried by any of the following things?

	PERCENT responding TO SOME, A GREAT, or A VERY GREAT EXTENT:			
	Medical Doctors	Doctors of Osteopathy	Doctors' Doctors	Informal/Formal Consultants
(a) How good a job I am doing	62	75**	71*	69
(h) The effective use of my time	46	53**	53	52
(g) Feeling that I am not keeping up to date	43	56**	50**	48
(n) Having to do things one really doesn't want to do, certain administrative duties, etc.	42	41	45	42
(p) Having to put up with and tolerate incompetence	41	50**	47**	49**
(t) Being torn by conflicting demands	33	31*	43**	43**
(b) Failure to get ahead professionally as much as I had hoped to	32	40**	26**	29**
(e) Feeling that I am "in a rut" professionally	30	41**	37**	33
(c) Failure to get ahead financially as much as I had hoped to	28	35**	16**	15**
(d) Possibility that I may not be able to do what is expected of me in my work	28	38**	26	31
(o) Responsibility for and control of people's futures	27	36**	29*	28
(f) My health	26	29	28	27
(s) Having to work without adequate equipment	21	23	20	29**
(l) Lack of communication. Not learning in time about changes, problems, etc.	19	31**	21	28**
(m) Not being able to speak one's mind	19	20**	11	16
(j) The possibility of a disgruntled patient or his family initiating legal action	15	27**	22	17
(i) Having to consult with other physicians about a patient problem I do not understand	13	18**	10*	11*
(q) "Having to get along" with people	13	11**	12	16
(k) Other physicians in my specialty with whom I indirectly compete for patients may know more than I	11	11	13	11
(r) Difficulties in working with nurses, technicians, etc.	8	8	6	8
Average, No Response***	11	9	9	8
N =	919	183	96	89

*The mean of this distribution is significantly different from the mean of the medical doctors' distribution at the .05 level (t-test, two-tailed). On occasion, this significant mean difference is not reflected in the figures above, which present only the percentage of respondents in the upper three categories of the distribution.

**The mean is significantly different at the .01 level (t-test, two-tailed).

***The no response rate averaged for the twenty items.

formal consultants generally rated themselves as more effective is also reassuring to our analysis. There is a congruence between these doctors' *own* ratings of their competence and the evaluations made of them by *other* physicians.* These findings do, however, raise some question about how important the physician's own perception of competence can be in his concern for continuing education. If physicians generally feel themselves to be above average in competence, how much interest will they have in keeping abreast of new developments in their field?

Physician Worries

An attempt was made to understand further the motivational factors influencing physicians by asking about the things that bothered or worried them. This was done by presenting respondents with a list of 20 possible problems and asking the extent to which each was a source of "bother" or "worry" for them. For example, each was asked whether such things as "having to get along" with people, concern about one's competence, the responsibility of being a physician, and the need to assume administrative duties were sources of tension; at the same time an attempt was made to discover how greatly physicians were worried about the need to keep up to date. **Table 2** presents the results of this section of the study.

The greatest source of concern for medical doctors—and, indeed, for all four groups of respondents—concerned the question of competence: "how good a job I am doing." Sixty-two percent of the medical doctors said they were bothered or worried by this to some, a great, or a very great extent. Also of significant concern to medical doctors were the effective use of their time, the feeling that they were not keeping up to date, having to assume unwanted administrative duties, and having to put up with and tolerate incompetence. Least troublesome were having to consult with other physicians, "having to get along" with people, other physicians competing for patients, and difficulties in working with nurses, technicians, etc.

---

*These doctors were actually nominated by other doctors as being more competent.[1]

TABLE 3

37. From your perspective as a physician in a society where more and more dollars are being spent in research and development each year, to what extent do you feel the knowledge of professionals in different fields is vulnerable to being made obsolete?

		PERCENT responding TO A GREAT or VERY GREAT EXTENT:			
		Medical Doctors	Doctors of Osteopathy	Doctors' Doctors	Informal/ Formal Consultants
OTHER PROFESSIONALS	(a) Aerospace engineers	37	32**	46**	42
	(c) Physical scientists	29	22**	27	28
	(d) Social scientists	22	19*	16	11**
	(b) Electrical engineers	21	22	24*	24
	(k) Managers and administrators	20	18	15	10**
PHYSICIANS	(i) General practitioners	34	36	41	47**
	(f) Internists	22	20**	24	27
	(j) Psychiatrists	19	23	13	8**
	(g) Pediatricians	16	17	15	17
	(e) Surgeons	13	12**	9	10*
	(h) Obstetricians	9	10	6	7**
MYSELF	(l) The combination of special knowledges and competences that I have as a practicing physician	19	25*	18	19
	Average, No Response***	17	15	13	14
	N =	919	183	96	89

---

*The mean of this distribution is significantly different from the mean of the medical doctors' distribution at the .01 level (t-test, two-tailed). On occasion, this significant difference is not reflected in the figures above, which present only the percentage of respondents in the upper two categories of the distribution.

**The mean is significantly different at the .05 level (t-test, two-tailed).

***The no response rate averaged for the twelve items.

The replies of osteopathic physicians suggest they were generally more concerned about things than were medical doctors. Osteopaths differed from medical doctors in 15 instances, and in 13 of these, a larger proportion of osteopaths than medical doctors said they were bothered or worried. The items showing the largest percentage point differences were "how good a job I am doing" and "feeling that I am not keeping up to date," both of which relate to the idea of competence. Osteopaths reported less concern than medical doctors about being torn by conflicting demands and about "having to get along" with people.

Compared with medical doctors, smaller proportions of the criterion physicians—the doctors' doctors and the informal/formal consultants—said that failure to get ahead professionally or financially was worrisome for them. Fewer said they were worried about the need to consult with other physicians regarding patient problems they did not understand. These findings are what might be expected in light of data already reported on these criterion doctors: they have advanced farther both professionally and financially and they spend considerably more time giving than obtaining formal consultation.[5] More criterion physicians than medical doctors, however, said that having to tolerate incompetence and being torn by conflicting demands were sources of concern for them.

Within the general sample of medical doctors, surprisingly few background characteristics were associated with the report of bothers or worries. More surgeons than others said they were bothered by the necessity of tolerating incompetence (56 percent), and more were worried about the possibility of a disgruntled patient seeking legal action (22 percent). More pediatricians (42 percent) were bothered by the feeling of being in a professional rut and more obstetricians (38 percent) by responsibility for and control of people's futures. General practitioners were not distinguished by being either high or low in these questions about worries. It was also found that older doctors—in particular those over 65—were less worried about a variety of problems than were younger doctors.

Perceived vulnerability to obsolescence

A major source of motivation for continuing education activity is, no doubt, the feeling that one's professional knowledge is growing obsolete. The strength of this motivation may be affected by similar perceptions of the obsolescence of one's reference groups. If one feels that his knowledge is more outdated than that of the professionals with whom he compares himself, he may feel more urgency to update himself. If, on the other hand, he feels that he is as up-to-date as other professionals, he may feel less stimulation for educational activity.

In the present study physicians were asked to rate the extent to which they thought the knowledge of professionals in different fields was vulnerable to obsolescence. Some of these fields constituted a reference group for the physician which might be called "other professionals": aerospace engineers, electrical engineers, physical scientists, social scientists, and managers and administrators. The remainder constituted the reference group of "physicians": surgeons, internists, pediatricians, obstetricians, general practitioners, and psychiatrists. After rating the extent to which he thought the knowledge of each of these professionals was in danger of becoming obsolete, the respondent was invited to make the same rating for himself. Specifically, he was asked the extent to which "the combination of special knowledges and competences that I have as a practicing physician" was in danger of obsolescence. The replies of the four major groups of Michigan physicians are shown in **Table 3.**

Thirty-seven percent of the general sample of medical doctors thought the knowledge of aerospace engineers was vulnerable to obsolescence to a great or very great extent. Seen as less vulnerable by doctors were the knowledge banks of physical scientists, social scientists, electrical engineers, and managers and administrators. An average of 26 percent of the medical doctors thought the knowledge of these five professional groups was in great or very great danger of becoming obsolete.

Medical doctors saw general practitioners as the most vulnerable of the physician groups to obsolescence. Thirty-four percent said the knowledge of general practitioners was vulnerable to a great or very great extent. Internists, psychiatrists, pediatricians, surgeons, and obstetricians—in that order—were all seen as less vulnerable. An average of 19 percent of the medical doctors considered the knowledge of physicians at large to be vulnerable to a great or very great extent.

Finally, 19 percent of the medical doctors thought "the combination of special knowledges and competences that I have as a practicing physician" was in great or very great danger of being made obsolete. Medical doctors, then, saw themselves neither more nor less vulnerable than physicians at large, and they saw physicians at large in less danger of obsolescence than certain other professionals. General practitioners were the only group considered in greater danger of obsolescence than other professionals.

When osteopaths differed significantly from the general sample of medical doctors, it was in the direction of seeing less vulnerability in other professions (three instances), less vulnerability in other physicians (two instances), but more vulnerability in themselves. Since 66 percent of the osteopaths were general practitioners, this finding is predictable from data showing that general practitioners were seen by all groups as being in the greatest danger of obsolescence.

Criterion doctors were, for the most part, similar to the general sample in their estimates of vulnerability. The major difference between them and the general sample concerned the knowledge of general practitioners. As many as 41 percent of the doctors' doctors and 47 percent of the consultants (compared with only 34 percent of the general sample) thought that general practitioners were in great or very great danger of obsolescence.

It is clear that physicians, when making ratings of different professions, either understood different things by the phrase "vulnerable to being made obsolete" or saw different reasons for vulnerability. In the case of the nonphysician professions, it was the newest of the fields, aerospace engineering, whose knowledge was considered in the greatest danger of obsolescence. In the case of the physician specialties, however, it was perhaps the oldest area, general practice, which was seen as most vulnerable. It may be the case that physicians considered the knowledge of aerospace engineering highly vulnerable because of the large amount of research and development being done in that field and that they considered the knowledge of the general practitioner highly vulnerable because the role itself was seen as out of date in a time of specialization. Internists, according to this interpretation, were seen as vulnerable for the same reason that aerospace engineers were (rapid development of knowledge in the field), and not for the same reason as general practitioners.

Within the general sample of medical doctors, few background characteristics were associated with these ratings of vulnerability. In general, doctors within a given specialty were more concerned than doctors outside the specialty about the vulnerability of that specialty's knowledge. More pediatricians than others, for example, thought the knowledge of pediatricians was vulnerable to becoming obsolete. General practitioners were among those showing most concern over the knowledge of general practitioners. Internists saw not only more vulnerability to obsolescence in their own specialty but in other specialties as well.

Profiles of Three Groups

Sharp pictures of three groups emerged from these and other data on the motivational forces in the life of physicians. Criterion doctors, first of all, reported greater stimulation than the general sample from internal sources and from physician colleagues.[1] They expressed stronger work needs and said they had more opportunities to fulfill those needs.[2] They were more confident about their overall ability as physicians, less worried about professional advancement, but more concerned about doing a good job and keeping up to date. They seemed to be highly motivated to continue their professional growth by a sense of their own ability—an ability which had already met with considerable success. Criterion doctors were younger than the general sample (only 11-12 percent, compared with 33 percent of the general sample, were over 55), and this may account in part for their greater sense of competence and their commitment and concern to continuing their learning.

Osteopaths, on the other hand, tended to report less stimulation than the general sample of medical doctors from internal sources and from physician colleagues and more from patients and administrators.[1] Like criterion doctors, they expressed stronger work needs, but they were significantly more pessimistic about the possibility of their work situation fulfilling those needs.[2] Osteopaths were less confident in their ability as physicians, more worried about a number of problems, and more concerned about their own obsolescence. They appeared to be eager for educational activity, but their eagerness appeared to derive from a sense of deficiency rather than one of fulfillment. Like criterion doctors, osteopaths were younger than the general sample (only 14 percent were over 55), and this may explain their eagerness for the professional growth that would elevate them, as they view it, to the level of other physicians.

Medical doctors in general practice presented a somewhat different picture. Like osteopaths, they reported less stimulation from other physicians. Unlike osteopaths, however, they consistently expressed less intense work needs, even though they agreed that work provided little opportunity to meet those needs. General practitioners were less confident than others in their ability as physicians but were not distinctively worried about this or other problems. While they agreed that general practitioners as a group were in danger of obsolescence, most did not see themselves as individuals in great danger. The overall portrait was of a group operating like osteopaths from a sense of deficiency but not as eager as osteopaths to make up the deficiency. The picture is readily explained by the fact that 45 percent of the medical doctors in general practice (compared with only 14 percent of the osteopaths) were over the age of 55.

Summary and Implications

Nearly all the medical doctors in this survey thought of their effectiveness as physicians as at least a little above the average, and more than a third considered themselves in the upper 10 percent of physicians in their specialty. Doctors under 56 were more confident of their ability than those 56 and over. Surgeons were also more confident than others, and general practitioners and pediatricians were less confident. Doctors were most worried about "how good a job I am doing," "the effective use of my time," and "feeling that I am not keeping up to date." General practitioners were felt by all respondents to be in the greatest danger of obsolescence.

Compared with the general sample of medical doctors, doctors' doctors and consultants were more assured of their ability as physicians, less worried about professional advancement, and more concerned about doing a good job and keeping up to date. As a group, criterion physicians appeared to be successful, confident of their ability, and eager to continue their professional growth.

Compared with medical doctors, doctors of osteopathy were less confident in their ability as physicians, more worried by a variety of problems, and more concerned about becoming obsolete. In general, osteopaths were eager for professional education, with the eagerness stemming from a sense of deficiency rather than one of fulfillment.

Like osteopaths, medical doctors in general practice were less assured of their ability as physicians. They indicated concern about the danger of general practitioners becoming obsolete, but they were not particularly worried about their own obsolescence as individuals. General practitioners, like osteopaths, were aware of a deficiency in their professional knowledge, but—perhaps because of their advanced age—were not as motivated as osteopaths to overcome the deficiency.

It is clear that the time is right for concerted educational effort in the direction of osteopathic physicians. The data point to a sense of urgency in this group to upgrade its storehouse of professional knowledge and skills. More troubling is the picture presented by the large numbers of medical doctors in general practice. General practitioners are aware of deficiencies in their knowledge and skill bank, but they are not as motivated to overcome the deficiencies. Special attention must be given to the role of the generalist by continuing education planners and efforts made (1) to recruit youth into this role and (2) to attract physicians already in it to greater educational activity.

A key to efforts in the direction of the generalist, whether he is a medical doctor or an osteopath, may be the criterion doctor. He is well established, assured of his competence, and highly motivated. If some of his energies can be directed to the educational needs of the generalist, there could be a remarkable payoff for the state of knowledge in the profession as a whole and ultimately for the quality of patient care delivered by the profession.

References

1. Mann, F., Kotre, J., Reilly, A., and Vanselow, N. The Michigan Physician and His Continuing Education, *Michigan Medicine.* 69: 981, 1970.
2. Mann, F., Kotre, J., Reilly, A., and Vanselow, N. The Michigan Physician: His Work Needs and Opportunities, *Michigan Medicine.* 69: 1063, 1970.
3. Kotre, J., Mann, F., Morris, W., and Vanselow, N. The Michigan Physician's Use and Evaluation of the Medical Journal, *Michigan Medicine.* 70: 11, 1971.
4. Kotre, J., Mann, F., and Vanselow, N. The Michigan Physician: His Use and Evaluation of the Professional Meeting and the Postgraduate Course, *Michigan Medicine.* 70: 111, 1971.
5. Kotre, J., Mann, F., and Vanselow, N. The Michigan Physician: Education through Face-to-Face Contacts and Technical Media, *Michigan Medicine.* 70: 193, 1971.

MICHIGAN
DEPARTMENT
OF PUBLIC
HEALTH

Monthly Surveillance Report

Cases of Certain Diseases Reported To the Michigan Department of Public Health

For the Four-Week Period Ending February 26, 1971

	1971 This 4-Week Period	1970 Same 4-Week Period	1971 Total To Above Date	1970 Total Same Date	Total Cases for 1970
Rubella	276	299	432	616	3,012
Congenital Rubella Syndrome	0	0	0	0	2
Measles	76	84	129	124	1,834
Whooping Cough	11	17	15	24	195
Diphtheria	—	—	—	—	—
Mumps	1,309	637	2,399	1,139	7,825
Scarlet Fever & Strep Sore Throat	1,440	1,503	2,689	2,713	11,863
Tetanus	0	1	0	1	8
Poliomyelitis (paralytic)	0	0	0	0	1
Hepatitis	419	325	811	748	4,594
Salmonellosis (other than S. typhi)	47	40	102	91	665
Typhoid Fever (S. typhi)	1	0	1	1	14
Shigellosis	11	11	39	28	225
Aseptic Meningitis	10	6	20	11	296
Encephalitis	14	4	24	12	155
Meningococcic Meningitis	7	5	11	15	69
H. Influenza Meningitis	5	4	14	12	61
Tuberculosis	144	173	293*	349	2,006
Syphilis	285	284	633	534	3,900
Gonorrhea	1,359	1,689	2,991	3,243	20,676

Information can be supplied by the local health department on the local incidence of disease.

* Correction made in total since 1/1/71

Maurice Reizen, M.D., Director
Michigan Department of Public Health

Perinatal Tips

By Paul M. Zavell, MD
Detroit

The following case from the files of the Wayne County Medical Society Perinatal Mortality Committee is presented as an aid in continuing education.

Maternal

This was the fourth pregnancy of this 31-yr.-old-A+ black mother. All prior infants are said to be well. During this pregnancy she was admitted twice, the first time for pericarditis and the second for myocarditis. She had no history of hepatitis. It was learned subsequent to her second admission that she and her husband were Heroin addicts so that group therapy was recommend for them. Their attendance at such sessions v infrequent. At the time of admission it was termined that she had been taking two doses I.V. Heroin a day for the past 7-8 years with t exception of one day immediately precedi delivery. She denied taking other medicatio Labor and delivery were not unusual in any w Mother's STS was nonreactive.

Fetal

7 lb. 1½ oz. Black Male Infant at birth peared completely normal. However, at appro mately 36 hours of age he began to have m twitching. At the onset of twitching, Chlorp mozine 2 mgm q 6 h was started P.O. This w continued for 16 days when it was decreased 1 mgm q 6 hr and was gradually tapered off ov the following week. No recurrence of sympto developed. Blood counts, Bilirubin determi tions, PKU, etc. were negative. The infant w discharged asymptomatic and with normal physi findings at two months of age. He was plac in a foster home. On one return trip to t hospital the infant appeared normal with symptoms.

Perinatal Committee Comments

1. Heroin addiction of infants is probably the increase because of the drug problem n existing in young people. This case points o one method, Chlorpromozine (Thorazine) th may be used. Other drugs that may be used this are Paregoric alone or in combination wi Chlorpromozine or Paregoric with Barbiturat The use of methadone in infants is not reco mended at this time. Standard books on Pediatri Pharmacology and past issues of Pediatric Clin of North America discuss proper dosage.

2. It is important to separate the child fr the parents by legal means if necessary un proper environmental conditions in a non-n cotic addicted home are present.

The author is chairman, Neo-Natal and Hospital Care Committee, Michigan Chapter, A.A.P., and chairman, Perinatal Mortality Study Committee, Wayne County Medical Society.

Attitudes toward Michigan's abortion law

And experience of Michigan physicians with requests for abortion

In 1969 and 1970 changes in Michigan's abortion laws were introduced in the state legislature. Such legislation obviously engenders marked feelings amongst Michigan physicians. At present, changes in legislation are once again being proposed. Legislative changes were passed last year in New York State. This allows medical practitioners ample opportunity to form their viewpoints and attitudes. This article is a survey of medical attitudes in Michigan. It should be studied by all concerned with the problem.—John W. Moses, MD, scientific editor

By Barbara Serena, MSW, MPH
Patricia Sullivan, BSU, MPH
Jack Stack, MD
Roy Smith, MD, MPH
Johan Eliot, MD, MPH

Introduction

Michigan was one of the many states with century-old criminal codes that allow abortion only to preserve the mother's life, in which liberalized abortion laws failed to pass in the 1969 legislature.

With massive public opinion behind them, the sponsors introduced a far more liberalized bill in 1970, which again failed to pass by a close vote.

In 1968 the Michigan Council for Study of Abortion in collaboration with the University of Michigan Center for Population Planning undertook a study to find certain information greatly needed by Michigan legislators concerning: (1) the attitudes of Michigan physicians toward change of Michigan's abortion law, and (2) the experience of Michigan's physicians in receiving requests for abortion, as an indication of the dimensions of the abortion problem. Some preliminary information from this study was furnished to the Michigan legislature in 1969.[1,2,3]

Michigan physicians are, of course, deeply concerned with health problems presented by illegal abortions and unwanted births, but they are also worried about potential burdens on professional facilities that may follow sweeping liberalization of the law, for which purpose the numbers and characteristics of women asking for abortions are perhaps the most relevant available indicators of service load.

Study Methods

Using a list of all registered physicians furnished by the Michigan Board of Registration in Medicine and the Michigan Osteopathic Association, questionnaires were mailed to all medical and osteopathic physicians in Michigan. The questionnaires were precoded into 15 geographic areas but otherwise bore no identification. In order to classify responses, physicians were asked to state their specialty, age, sex, religion, and race.

In the first question, the physicians were asked to indicate whether the present Michigan Criminal Code section on abortion (which forbids abortion except to preserve a woman's life) should be (1) abolished as it refers to physicians, (2) replaced or revised, (3) retained with its present degree of enforcement, or (4) retained and more rigidly enforced. Supplementary explanations of these alternatives were appended.

In the second question, the physicians were asked to state the number of women who had made inquiry of them about an abortion, or on behalf of whom someone else had contacted them, within the last six months. They were then asked to classify each woman by age group, marital status, economic level, and race. Most physicians who

---

This study was supported in part by grants from the Michigan Council for Study of Abortion, and from the Michigan State Senate Committee on Abortion Law Reform.

Miss Serena is Supervisor, Social Service Department, New Jersey College of Medicine and Dentistry, Martland Hospital. Miss Sullivan is Director of Family Planning, Yolo County Health and Family Planning Association, California. Doctor Stack practices in Alma, Michigan. Doctor Smith, now Professor of Maternal and Child Health, University of Hawaii School of Public Health, was formerly Pediatric Consultant, Michigan Department of Public Health. Doctor Eliot is Associate Professor of Population Planning, School of Public Health, University of Michigan.

"Physicians' attitudes toward the law varied with the number of requests for abortion they had received."

reported receiving requests for abortion were able to give this information on most of these contacts, but some physicians who had received rather large numbers of contacts were unable to give this information on all or part of the women requesting abortions.

In order to determine how representative the response to the questionnaire was of all Michigan physicians, a systematic random sample of these physicians was administered the questionnaire by telephone. The portion of question number two inquiring into the characteristics of the women requesting abortion was omitted, but physicians were asked whether or not they had responded to the original questionnaire.

Response

The questionnaires were completed and returned by 39% of the 10,924 physicians in Michigan: 38% of the members of the State Medical Society and 36% of those who were not members; 52% of the members of the State Osteopathic Association and 20% of those who were not members (**Table 1**).

The total sample for the phone survey consisted of 404 physicians. Of these it was not possible to contact 94, principally because a phone listing was unavailable, 8 being unlisted by request. Of the 310 phone calls completed, 9% (or 29 cases) refused to respond. The refusals covered a wide spectrum from hostile, negative comments about the abortion issue, to indifference and expression of lack of time, through positive verbalization about the effort to liberalize the law and the frank opinion of two physicians who did not trust that their replies would be confidential. The 281 physicians who responded to the phone survey represented 2.5% of the total medical physicians and 2.7% of the osteopathic physicians.

One third of the telephone respondents were unable to recall whether or not they had responded to the questionnaire. However, of those who did remember, the proportion of physicians who said they had responded to the mailed questionnaire was within 2% of the ratio of actual questionnaire responses to the total registered physician population, with the differential in response between medical and osteopathic physicians also corresponding very closely.

In relation to numbers of specialists registered in Michigan, general practice and internal medicine were slightly over-represented in the questionnaire responses, while surgery was somewhat under-represented.

Regarding geographic distribution, there was slight under-representation of medical physicians of Wayne County in the phone survey, and of osteopathic physicians in Wayne and Oakland Counties in both the questionnaires and phone survey.

The age distributions of medical and osteopathic respondents to the questionnaire were similar. Age distribution of respondents who were members of the Michigan State Medical Society was younger than the distribution of the Society's membership roster, however, with 26% of the respondents between 30 and 39 (compared to 19% of those on the roster), and 39% of respondents over 50 (compared with 48% of those on the roster). The age distribution of medical respondents who were not members of the Medical Society was even younger (73% under age 40), with the result that for all medical respondents, there were approximately equal numbers in the age brackets 30-39, 40-49, and 50 and over, with 6% under 30 years. As stated above, the age distribution of osteopathic respondents corresponded very

TABLE 1

Response of Physicians to the Questionnaire

Type of Physician	Total Number	Number Responding	Response Rate
All Michigan Physicians	10,924	4,217	39%
Medical	9,057	3,384	37%
Members of State Medical Society	6,754	2,547	38%
Non-Members	2,303	837	36%
Osteopathic	1,867	833	45%
Members of State Osteopathic Assoc.	1,439	749	52%
Non-Members	428	84	20%

closely to that of medical respondents, with a slightly lower percentage over 50 years of age.

The age distribution of medical physicians contacted in the phone survey corresponded closely to that of the Medical Society membership, with only 1% under 30 years, and the age distribution of osteopathic respondents to the phone survey was very similar with none under 30 years. In summary, it appears that younger physicians, both medical and osteopathic, responded to the questionnaire in somewhat higher proportions than did older physicians.

The distribution by religions of the respondents to the questionnaire and phone survey were very similar. For example, 16% of the medical respondents to the questionnaire were Catholic, compared to 17% of the medical respondents to the phone survey. For the osteopathic physicians, these proportions were 20% and 18%, respectively.

Assuming that approximately 3% of the medical physicians are black,* they were under-represented in the questionnaire responses. Three percent of the respondents to the phone survey of medical physicians were black, whereas 1.8% of the medical respondents who were members of the Michigan State Medical Society, and 2.6% of those not members, were black. Only 1% of osteopathic respondents to the questionnaire were black.

The above-noted biases in distribution of questionnaire responses, while relatively small, have been taken into account in interpreting the questionnaire data. The most serious deviation is the under-representation of black physicians, since the population served by them differed markedly from that served by white physicians, as noted and discussed below. The dissimilarities found between respondents to the phone survey who had answered the questionnaire, those who had not, and those who were not sure, have also been considered in adjusting the findings of the questionnaire.

Findings

1. Attitudes of Physicians toward the Present Michigan Abortion Law.

In response to the first question, regarding their attitude toward the present Michigan abortion law, 33% of all physicians preferred that it be abolished as it refers to physicians, while 54% wanted it replaced or revised along the lines proposed by the Michigan Bar Association (an improvement on the American Law Institute Model Penal Code), a total of 87% who wanted the law changed. Eight percent wanted to retain the present law with its present (rather lax) enforcement, and only 5% wanted the present law retained and more rigidly enforced. In the phone survey, 84% favored change, but with the following variations: Of those physicians who remembered responding to the questionnaire, 91% favored change; of those who could not remember whether they had responded to the questionnaire, 86% favored change; of those who knew they had not responded to the questionnaire, 75% favored change.

In their responses to the mailed questionnaire, of these physicians who were not members of their professional societies, 91% of the medical physicians and 93% of the osteopathic physicians favored change in the law, compared with 87% and 84% of the members of the medical and osteopathic societies, respectively.

Physicians' attitudes toward the law varied with the number of requests for abortion they had received. For example, of all physicians who received one or more requests, 92% favored change in the law. As another example, of these physicians not members of their professional associations who received four or more requests for abortion, 99% favored change in the law.

There was some variation by geographic area. The lowest percentage of physicians favoring change in the law in any area was 77%; the highest, 96%, was in Washtenaw County, a suburban county encompassing a medical school and two university communities. In Wayne County, including Detroit, 87% of the physicians preferred abolishing or liberalizing the law, the same as the statewide figure.

All specialists favored change in the abortion law to a greater extent than general practitioners, 89% compared with 83%. Among the specialists, 94% of the psychiatrists and 92% of the pediatricians favored change, compared with 88% of internists, surgeons, and obstetricians. The greatest differences between specialists who were members of their professional societies and those who were not were in internal medicine and obstetrics, where 86% of members and 93% of non-members favored change in the law.

As expected, there was less enthusiasm for changing the abortion law amongst Catholic physicians than amongst others. Nevertheless, 58% of Catholic physicians replying wanted the law changed (compared with 93% of all others). Opinions of Catholic physicians varied with specialty: 57% of Catholic obstetricians favored change in the law, but 78% of Catholic psychiatrists favored change.

Age made some difference: 93% of physicians under 30 favored change in the law, compared with 87% of each age group over 30.

---

*Based on the Detroit Medical Society membership of 200 (nearly all black) and an estimated 75 black physicians who are not members.

"Thirty-nine percent of the physicians responding to the questionnaire reported receiving requests for abortion during the last six months . . ."

Sex of the physician made no difference in the overall majority favoring change of the law for professional society members, but among non-members, 96% of women and 91% of men favored changing the law. There was a qualitative difference, however, in that women physicians favored abolishing the abortion law as it refers to physicians, instead of merely revising it, much more frequently than did men.

Race of physician made a difference: 96% of black physicians favored a change in the law, compared with 87% of white physicians and 84% of physicians of "other" races.

2. Experience of Physicians with Requests for Abortion.

Thirty-nine percent of the physicians responding to the questionnaire reported receiving requests for abortion during the last six months, 36% of medical physicians and 51% of osteopathic physicians. In the telephone survey, 38% of medical and 61% of osteopathic physicians had received requests. In actual numbers of requests, medical physicians (who comprised 80% of the respondents) reported 75% of the requests.

By geographic area, the highest proportion of physicians who had received abortion requests was 50%, in southern Oakland County, a residential suburban area. The lowest proportion was 24% in the rural Upper Peninsula area. In actual numbers, Wayne County (with Detroit) had the highest with 35% of the total, followed by Washtenaw County with 15%, and southern Oakland County with 9% of the total requests for abortion. Within counties there were two instances where non-members of professional societies received requests at substantially higher rates than members: In Washtenaw County, medical physicians who were not members of the Michigan State Medical Society received 38% of the total requests made to non-member medical physicians in the state, while those who were members received only 11% of the total requests to medical society members. For osteopathic physicians in southern Oakland County the corresponding percentages were 22% and 6%.

The percentage of physicians who had received requests for abortion varied sharply by field of practice. Of all obstetricians, 71% had received requests, followed by 56% of psychiatrists, 52% of general practitioners, 36% of internists, 24% of pediatricians, 22% of surgeons, and 17% of other specialists. The greatest differential between medical and osteopathic physicians occurred between general practitioners: 60% of the osteopathic and 46% of the medical general practitioners had received requests. Amongst medical general practitioners, 9% more of those who were not members of the Michigan State Medical Society had received requests than of those who were members.

The distribution of the actual numbers of requests for abortion also varied sharply by field of practice. General practitioners, comprising 33% of the respondents, received 44% of all requests. Obstetricians, comprising 9%, received 24% of the requests. Psychiatrists and internists, comprising 7% and 13% of the respondents, each received 10% of the requests. Pediatricians, comprising 6%, also received 6% of the requests, while surgeons, comprising 10%, received 5% of the requests. "Other" specialists comprised 22% of the respondents but received only 6% of the requests for abortion.

The physician's religion made a substantial difference in whether he was approached by women seeking abortion. Fifty percent of Jewish physicians reported receiving requests for abortion, compared with 38% of Protestant and 32% of Catholic physicians. Among Catholic physicians, osteopathic physicians had received requests at nearly twice the rate of medical physicians: 49% compared with 27%. As for the actual number of requests received, Catholic physicians who comprised 17% of the respondents, received 11% of all the requests for abortion.

There was no distinct correlation between physicians' age and receipt of requests for abortion. Sex of the physician also made no difference in the proportion of physicians receiving requests. Race, however, made a difference: 64% of the black physician respondents received requests for abortion, compared with 39% of white physicians and 50% of physicians of "other" races. Black physicians, who comprised 2% of all respondents, received 6% of actual requests for abortion.

3. Characteristics of Women Requesting Abortion.

In overall percentages, the great majority of abortions were sought by white women who were not indigent. Only 10% of the requests were from black women, and just 12% were from indigent women. However, these proportions varied sharply by geographic area: 23% of the women requesting abortions in the Muskegon area were black, 17% in Wayne County, 15% in Lansing, 13% in Genesee County, down to a low of 2% in Battle Creek and in the rural lower peninsula. The proportion of women classified as indigent was correspondingly high in areas with many black applicants, and was also high in Jackson and Pontiac. Of white women, 9% were classified as indigent, while 50% of black women were reported to be so. However, of all indigent women seeking abortion 55% were white (many young and unmarried). The level of indigency decreased with increasing age of the women and was lower amongst married women.

The proportion of requests from young, unmarried women was higher than has generally been thought to be the case. Thirty-four percent of requests came from women under 20 and 90% of these women for whom marital status was recorded were unmarried. Requests from the unwed constituted 58% of all requests for which marital status was recorded, the percentage being the same for both white and black women. However, above age 20, the majority of requests were from married women, 52% of those between 20 and 34 years, and 83% of those 35 and over.

Of white women requesting abortion, 16% were 35 and over, compared to 8% of black women; 36% of white women were between 20 and 34, compared to 51% of black women. Black women appear to be seeking abortion more intensively in their main childbearing years, rather than at the extremes of the childbearing age span.

A greater proportion of women under 20 years sought abortions from general practitioners, 52%, as compared to 42% for women 20 and over. A higher proportion of women over 35 requested abortions from physicians who were members of professional societies than in the other age groups. There were no significant relationships between the women's marital status and the physician variables studied.

Indigent women made 17% of the requests directed to physicians who were not members of their professional associations as compared to 10% of those directed to members. There was no appreciable difference in the proportions of indigent women who requested abortions from medical and from osteopathic physicians. Of those physicians who saw a high proportion of indigent women, a higher proportion favored elimination of the abortion law as it refers to physicians, than of those physicians who saw few indigent women. Only 3% of the indigent women directed their requests for abortion to a woman physician, as compared to 6% of non-indigent women. Twenty percent of indigent women saw black physicians, while only 4% of non-indigent women saw black physicians. Forty-six percent of the women requesting abortion from members of the Detroit Medical Society were indigent (these physicians serve many patients from Detroit's inner city).

Of the women requesting abortions from physicians who were not members of their state professional societies, 17% were black, while only 8% of women who approached members of professional societies were black. Among physicians approached by a high proportion of black women, a high proportion favored abolition of the Michigan abortion law as it refers to physicians. Black women saw a higher proportion of internists and a lower proportion of phychiatrists than white women and women of "other" races. Forty-five percent of black women requested abortion from Protestant physicians, compared to 56% of white women; and 7% of black women saw Catholic physicians, compared to 12% of white women. The proportions of black and white women who approached Jewish physicians were equal. Of the black women requesting abortion, 25% approached physicians of "other" or no religion, as compared to 12% of white women and 9% of women of "other" races. Fifty-five percent of white women approached physicians who were over 40 years of age, compared to 48% of black women. The most striking difference in physicians approached by black and white women, however, was that 39% of black women saw black physicians, compared with only 2% of white women. Of the women seen by members of the Detroit Medical Society, 74% were black.

4. Number of Requests for Abortion in Michigan.

It was possible to estimate the total number of requests for abortion that were received by physicians in Michigan in one year, on the basis of the requests for abortion within the past six months reported in these studies. Questionnaire respondents reported an average of 1.4 requests for abortion per physician in the previous six months. This average varied with specialty: General practice and internal medicine 1.6, obstetrics 3.8, psychiatry 1.9, pediatrics 0.4, surgery 0.7, other specialties 0.4, specialty not indicated 0.4. The actual numbers of requests recorded in the questionnaire responses for the previous 6 months totalled 5907.

The average number of requests received by physicians who did *not* respond to the questionnaire but responded to the telephone survey was 1.4, identical with that from the questionnaire.† In this same group, the average requests for some specialties were higher, others lower, than the questionnaire respondents: General practice and internal medicine 2.3, obstetrics 3.3, psychi-

". . . we arrived at a sum of 14,350 requests for abortion made to Michigan physicians in six months, or 28,700 in a year."

atry 3.3,* pediatrics 1.3, surgery 0.6, other specialties 0.2.† These specialty averages were multiplied by the number of physicians in each specialty who had *not* replied to the questionnaire, producing a projected total of 8445 requests for the previous six months. Adding the above totals and rounding, we arrived at a sum of 14,350 requests for abortion made to Michigan physicians in six months, or 28,700 in a year.

The roster of Michigan physicians furnished by the Michigan Department of Public Health listed 871 physicians without a specialty. Only 19 of the questionnaire respondents listed "no specialty" and none of the telephone respondents did, so we felt we knew very little about this category of physicians. Hence, no abortion requests were assumed for the non-respondents in this group, although the 19 who responded to the questionnaire had received an average of 0.4 requests each in six months. Also omitted from calculations are the 9% of physicians who declined to respond to the telephone survey.

The respondents to the telephone survey who had responded to the questionnaire reported an average of 2.2 requests for abortion per physician, in contrast to an average of 1.4 per physician cited on the questionnaires. If the averages for the specialties derived from the phone survey were projected to the numbers of physicians who had responded to the questionnaire, the results of calculations would lead to a sum of 35,200 abortion requests per year.

For several reasons, therefore, we felt assured that the figure of 28,700 requests was a conservative one, not inflated. The somewhat higher average number of requests for abortion reported by physicians in the telephone survey who recalled responding to the questionnaire may have been due to the greater ease of replying on the telephone, when they were not asked to supply information on each individual woman, which might have led to some overstatement of numbers, or the questionnaire's demand for details may have led to omission of some women on whom details were not recalled or known. In any case, we have chosen the lower figure.

Discussion

The heavy majority of Michigan obstetricians favoring either liberalization or abolition of the abortion law, 88%, is similar to the 85% of obstetricians favoring liberalization of the law in New York State,[4] and is somewhat higher than the 79% response to this same question given by chiefs of obstetrics in hospitals with obstetric residencies in the United States and Canada.[5] While only a few obstetricians hold conservative views regarding abortion, those few, if appointed to abortion review committees where unanimous decision is required, can thwart the medical judgment of the majority of their colleagues.

The fact that physicians who were not members of professional societies had somewhat more liberal views on changing the abortion law than those who were members may have been related to the higher proportion of young physicians, who heavily favored liberalization, among physicians who were not society members.

Certain categories of physicians were approached more frequently by women seeking abortion than were others. One category, black physicians, seems easy to understand, since they serve more people, are intensively sought out by black women, are seldom Catholic, and serve urban populations where requests for abortion are more frequent. On the other hand, the high rate of requests to osteopathic physicians is hard to explain. While those working in suburban areas had many requests, a smaller proportion of them practice in suburban areas and more are in rural areas, where request rates are low. Fewer osteopathic physicians are black and more are Catholic than among medical physicians. A higher proportion of Catholic osteopathic physicians received requests for abortion than did non-Catholic medical physicians. Sex and age do not help to explain this difference. It would appear, simply, that women for some reason regard osteopathic physicians as more approachable than medical physicians. Presumably this image will continue, and osteopathic physicians in particular will need to plan ways to serve the many women who ask them for help with abortion, when the law is changed to permit this service. The same will be true for black physicians.

---

*We deleted one respondent from the phone survey, a psychiatrist who reported receiving 312 requests for abortion in the past 6 months, and had not responded to the original questionnaire. With this response included, the average number of requests per psychiatrist for those not responding to the questionnaire would have been 65.0 (instead of 3.3), which seemed quite unrealistic.

†In calculating these averages, one half of the physicians who could not remember whether they had responded to the questionnaire were lumped with those who knew they had not responded, and one half were allocated to those who knew that they had responded.

The data on characteristics of women requesting abortion had a number of aspects worthy of comment. Characteristics of women approaching different physicians varied widely. It appeared likely that these differences reflected more the overall characteristics of patients served by each physician than any special selectivity related to the abortion request. Nevertheless, some patients of Catholic physicians may have taken their requests to a non-Catholic physician. Liberality toward abortion (as indicated by liberal attitude toward change in the law) may have made some difference in the "approachability" of some physicians, but this could equally well be an effect of receiving many requests on development of the physician's opinion about the law, i.e., a circular self-reinforcing relationship.

This study agrees with that of a study similar to this one, done in Hawaii,[6] and with some fragmentary data furnished by individual abortionists in recent years indicating that the women seeking abortion now are far more commonly young and single than formerly. The statement that most abortions are sought by married women, based on data from the 1930's and 1940's, simply is no longer true. It does remain true that a majority of women over 20 seeking abortion are married and concerned with excess childbearing, but the lower proportion of these women in the total group seems to suggest that married women are now using contraceptives more competently and needing fewer abortions. The inability of young unmarried girls, even college girls, to use contraceptives with equal competence is an alarming and distressing problem of our times, requiring intensive action-research.

Another familiar idea, still based largely on the studies of Gebhard, et al,[7] is that abortions are largely sought by white, middle class women, seldom by indigent, black women. While only 10% reported in this study were black, and only 12% indigent, the low level of reporting from black physicians, and the high average number of requests from black and indigent women received by the black physicians who responded, suggests that requests from black and indigent women were considerably under-reported in this study. The proportion of black physicians reporting was so low that we have hesitated to extrapolate and make correction factors based on our data from the relatively few who did report. This question calls for further study, but we feel there are hints of a substantial change among black women, who are now seeking more abortion services as part of an overall desire to regulate unwanted reproduction.

In this connection, a major problem to which Michigan physicians will have to address themselves once it becomes possible to offer abortion services on the basis of medical judgment and patients' desires, is the cost of abortion services. Unless the service can be made available at a minimal price, one goal of major liberalization of the law will have been missed: Availability of abortion services to women with low incomes. If costs are not lowered, there can remain a market for low-priced, possibly very disreputable illegal abortionists. Recognition will need to be taken of modern abortion procedures throughout the world, where abortion is often done in special hospital clinics as an outpatient procedure but with provision for retaining or referring women with complications. The Bursley bill, SB 1260, narrowly defeated in the 1970 Michigan legislature, wisely did not restrict the performance of abortions to hospitals, but made provisions for development of standards for, and approval of, other types of facilities.

Medical literature and legislative hearings are replete with varying estimates of the number of illegal abortions performed per year in the United States, many of which circularly quote each other, and none of which have much of a factual basis. The 1965 Growth of American Families Study made a serious attempt to get at this matter by direct questions, without success. More indirect methods have therefore seemed to be worth trying, and this is one. We have no information on the outcome of these abortion requests, but we feel that the request itself is a more accurate indicator of need for this service than any count of actual illegal abortions which might be made. We have no way of knowing how many women sought help from more than one physician, and hence were counted two or more times. We also have no way of knowing how many Michigan women, knowing the current Michigan law, did not seek help from a Michigan physician, but directly sought out an illegal abortionist through the devious networks of information that desperate women find. It is evident that these two sources of error cancel each other out in some degree. All in all, we conclude that a conservatively based extrapolation of the data we have received permits us to state that each year one out of every five or six Michigan women who become pregnant desires and seeks an abortion.

Summary

A survey of medical and osteopathic physicians in the State of Michigan in 1968-69 disclosed that 33% would prefer that the present Michigan Criminal Code section on abortion, which forbids abortion except to preserve a pregnant woman's life, be abolished as it refers to physicians, and another 54% wanted it replaced or revised, a total of 87% who wanted the law liberalized. Thirty-nine percent of the respondents to the questionnaire

". . . a major problem to which Michigan physicians will have to address themselves . . . is the cost of abortion services."

reported receiving one or more requests for abortion within the previous six months.

Physicians' attitudes toward change of the present abortion code and their experience with requests for abortion were examined in relation to the physicians' field of practice, age, sex, religion, race, geographic location within the State, and membership in the Michigan State Medical Society or Michigan Osteopathic Association. Data on the women requesting abortion included their age, marital status, economic level and race. The interrelationships between these variables were examined, as were the characteristics of the women requesting abortion in relation to the characteristics of the physicians to whom the requests were directed.

As might be expected, an overwhelming majority (93%) of non-Catholic physicians favored liberalization of the abortion law, but it is noteworthy that a clear majority (58%) of Catholic physicians also favored liberalization of the law. Physicians who were young and not members of professional societies favored abolition of the abortion law as it applies to physicians more so than older society members. Specialists, especially psychiatrists, favored change somewhat more than general practitioners, and physicians who had received four or more requests for abortion in the last six months almost unanimously favored change in the law.

Unlike older studies of women who sought abortion, a majority of these women were unmarried, and many were young. It appears that older, married women are now more successfully using contraceptives, but that young, unmarried women are doing very badly in this regard.

Based on the number of requests reported by respondents to the questionnaire and to a telephone survey administered to a randomly selected group of physicians, we calculated conservatively that 28,700 women requested abortion from physicians in Michigan in one year, which means that at least one out of every six women who become pregnant in Michigan each year requests an abortion.

Bibliography

1. Eliot, J. W., Stack, J., Smith, R. and Sullivan, P. Michigan Physicians' Views on Changing Michigan Abortion Laws and Experience with Abortion Requests (preliminary report on a study sponsored by the Michigan Council on Study of Abortion in cooperation with the University of Michigan, Center for Population Planning), 1969.
2. Serena, B. Testimony on Behalf of the Michigan Council for the Study of Abortion, Detroit, April 21, 1969.
3. Stack, J. M. Abortion Law Reform Progress in Michigan. *Michigan Medicine,* 69:23, 1970.
4. Hall, R. New York Abortion Law Survey, *American Journal of Obstetrics and Gynecology,* 93:1182, 1965.
5. Eliot, J. W., Hall, R. E., Willson, J. R. and Houser, C. A. The Obstetrician's View, *Abortion in a Changing World,* Vol. I, edited by R. E. Hall, Columbia University Press, New York and London, 1970.
6. Smith, R. G., Manner, B., and Goto, G. Physicians' Attitudes on the Abortion Law, Report of Survey, 1969, *Hawaii Medical Journal,* 29:209, 1970.
7. Gebhard, P. H., Pomeroy, W. B., Martin, C. E. and Christenson, C. V., *Pregnancy, Birth and Abortion,* Harper & Brothers, New York, N.Y., 1958.

Acknowledgements

The guidance of Professor John Takeshita and Howard Bond in treatment and interpretation of data, and the assistance of Glen Bates, Nancy Bates, Charles and June Burr, Judy Cogger, Frances Eliot, Janet Grant, Era Hill, Patricia Meyer, Eleanor O'Brien and Kristina Stevens in processing questionnaires and data are gratefully acknowledged. Finally, a word of thanks to Gitta Meier, who suggested the basic idea and plan for this study while she was a research associate at the Center for Population Planning.

Address reprint requests to Dr. Eliot. Complete sets of tables from this study are also available upon request.

The St. Clair County Gonorrhea Study:

Private and public health resources combine in an effort to control gonorrhea

By Robert E. Rowe, MD
Ronaldo S. Balboa, MD
Port Huron

An improved gonorrhea control program has been established through a cooperative effort between St. Clair County Health Department and local practicing physicians. After agreements were reached with the area physicians and the Health Department, a special gonorrhea study was initiated on August 1, 1969.[1] The study called for gonorrhea screening to be conducted by local physicians and the Health Department on asymptomatic females receiving pelvic examinations. Epidemiologic and laboratory services were provided by the St. Clair County Health Department.

The need for an effective gonorrhea control program is obvious. Past and current morbidity reports indicate a rapidly increasing rate of infection. During the past 11 years, reported gonorrhea morbidity in Michigan has risen from 8,621 cases in 1958, to 18,534 cases in 1969. During the same period, reported gonorrhea cases in St. Clair County have increased from 28 in 1958, to 215 in 1969.

Most physicians will agree that effective gonorrhea control presents many problems not generally found in the other venereal diseases. Shorter incubation periods, a lack of symptoms in the female, limited use of epidemiology and underdeveloped diagnostic aids present roadblocks to control. Recognizing these problems, local physicians and the St. Clair County Health Department undertook a one-year study to explore possible methods in developing an improved program for gonorrhea control.

A number of steps were taken to combat the assumed reservoir of gonorrhea infection—the asymptomatic female. A screening program was started to determine the prevalence of gonorrhea in the asymptomatic female. It was decided that the Thayer-Martin (VCN) culture media would be used during the course of the study. Thayer and Martin developed a selective medium for the cultivation of gonococci in 1964. The high degree of specificity and selective sensitivity of the medium makes it possible to accept with assurance presumptive culture testing for gonorrhea. The new medium uses vancomycin to inhibit gram-positive contaminants, sodium colistimethate to inhibit the gram-negative flora, and nystatin to inhibit yeast, which sometimes causes difficulty in vaginal and rectal cultures.

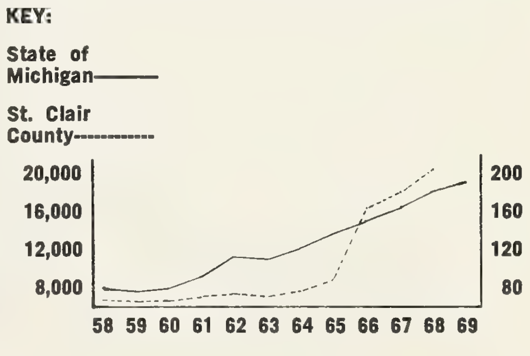
Information relating to culture techniques was sent to participating physicians. Culture kits consisting of swabs, slides and transport media were provided to physicians for use in the study.

The use of the Thayer-Martin culture as a diagnostic aid for gonorrhea was demonstrated to be far superior to the smear test. Ninety-five of the female gonorrhea cases were diagnosed with both smear and culture specimens being submitted to the Health Department laboratory. However, twenty-six had *negative* smears and *positive* cultures (27 percent).

The application of epidemiology by a trained venereal disease investigator provided by the Ve-

TABLE I

Reported Gonorrhea Cases, 1958-1969



---

[1] Doctors Robert E. Rowe and Ronaldo S. Balboa introduced the gonorrhea control study in St. Clair County. The study was supported by a grant from the Health Services and Mental Health Administration Division of the Center for Disease Control, Atlanta, Georgia.

Doctor Rowe is director, St. Clair County Health Department, and Doctor Balboa is a practicing internist in Port Huron and Venereal Disease Clinic physician, St. Clair County Health Department.

nereal Disease Branch of the United States Public Health Service resulted in an additional 60 cases being identified and treated by the Health Department. The combination of epidemiologic techniques and gonorrhea screening also improved the male-female case ratio. State and national averages for reported cases of gonorrhea among males versus females is: Males 75 percent; females 25 percent or a ratio of 3:1. After applied epidemiology and screening in St. Clair County, the averages were: Males 48 percent; females 52 percent, or a ratio of 1:1.

TABLE II

Comparable Effectiveness of Smear and Culture Tests for Gonorrhea Diagnosis in the Female

Total tests positive	95	(100%)
Smear positive	69	(73%)
Smear only positive	0	(0%)
Culture positive	95	(100%)
Culture only positive	26	(27%)

The study led to the discovery of a high incidence of gonorrhea infections among asymptomatic females in St. Clair County. The total number of female patients screened was 882. Of this number, 101 patients were positive. This represents 11.5 percent of the female screening population. In the 15-24 age group, the positive rate was 17 percent. This age group also composed 70 percent of the total new cases identified.

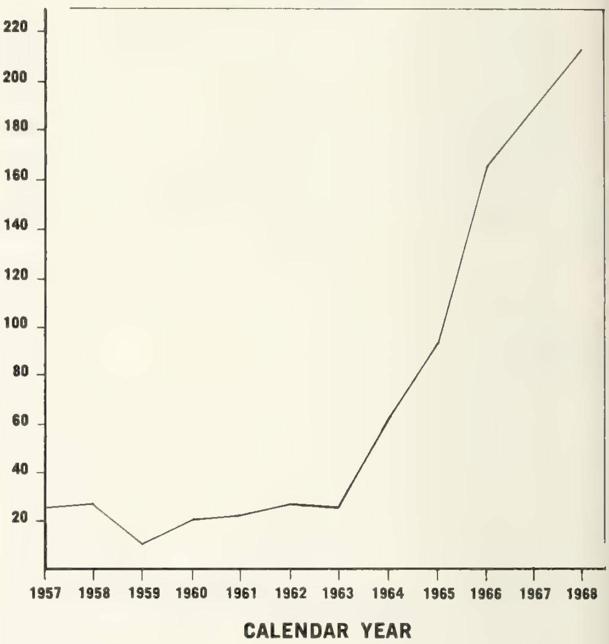
TABLE III

	Male	Female	Male:Female
National	74%	26%	3:1
State	75%	25%	3:1
St. Clair County	48%	52%	1:1

Discussion:

In order to establish an effective gonorrhea control program, it is imperative that the unknown reservoir of infection be found. When practicing physicians and the Health Department combine efforts to establish a gonorrhea screening program, many unknown cases will be detected among the asymptomatic female population. The use of epidemiology was demonstrated to be effective when combined with an aggressive screening program and cooperative physicians.

REPORTED GONORRHEA CASES
ST. CLAIR COUNTY
1957-1968



Through this cooperative effort, the importance of the Thayer-Martin culture as an effective diagnostic aid was also demonstrated.

It is also important to note that the diagnosis of gonorrhea in unsuspected females has doubled in St. Clair County, using these various techniques.

It is hoped that the physicians who participated in the screening program will continue to exhibit a high degree of suspicion when examining female patients. Other physicians, hospitals, and clinics can help to bring about effective gonorrhea control by screening female patients utilizing the methods described.

The Nephrotic Syndrome:

Its spectrum in the adult

By William G. Bouman, MD
Grand Rapids
John M. Weller, MD
Ann Arbor

The differential diagnosis of the nephrotic syndrome in the adult is not only important in terms of management and prognosis of the individual patient, but also presents a fascinating and difficult problem for the physician. Percutaneous renal biopsy makes it possible to identify the various pathological entities associated with the nephrotic syndrome and thereby to gain additional insight into the diagnosis in order to design appropriate therapy.

The purpose of this study is to describe the histologic findings in 65 adult patients with the nephrotic syndrome on whom renal biopsies were performed and to determine the clinical factors which correlate with the biopsy findings.

Methods

The 65 patients studied were all of those having the clinical diagnosis of nephrotic syndrome out of a total of 129 adult patients on whom renal biopsies were performed at The University of Michigan Medical Center during the period of October, 1965, through March, 1969. The biopsy experience prior to October, 1965, has been reviewed previously.[1] There were 40 men and 25 women with ages ranging from 14 to 65 years. The nephrotic syndrome was arbitrarily deemed to be present when 3.5 grams or more of protein were present in the urine per 24 hours.[2] In the majority of cases, there was at least one of the additional characteristics of hypoalbuminemia, hyperlipidemia, or edema. Three patients were included whose 24-hour urine protein values were 2 to 3 grams, since the presence of edema, hypoalbuminemia, and hypercholesterolemia justified the clinical diagnosis of nephrotic syndrome.

Percutaneous renal biopsy was performed using the Franklin modification of the Vim-Silverman needle following the appropriate preliminary studies as described by Greene and co-authors.[3] In those patients in whom the kidney could not be located using the exploring needle, a subsequent attempt was made with the aid of fluoroscopy.[4] The core of renal tissue obtained was serially sectioned at a thickness of 2 to 3 microns and routinely stained with hematoxylin and eosin. In addition, the combination periodic acid—Schiff and Gomori's methenamine silver stain was used to evaluate glomerular basement membranes.

TABLE 1. Diagnoses in 129 Renal Biopsies

Diagnosis	Number of Patients
Proliferative glomerulonephritis	23
Chronic glomerulonephritis	3
Membranous glomerulonephritis	33
Membranous and proliferative glomerulonephritis	7
Lupus nephritis	13
Pyelonephritis	3
Arteriolonephrosclerosis	6
Intercapillary glomerulosclerosis (diffuse)	6
Intercapillary glomerulosclerosis (nodular)	3
Acute tubular necrosis	2
Axial sclerosis	2
Focal glomerular fibrosis	1
Renal vein thrombosis	1
Hypersensitivity angiitis	1
Amyloidosis	1
Nephrocalcinosis	1
Hereditary nephropathy (? oxalosis)	1
Eclampsia	1
Fibrous granulomas	1
Acute necrotizing vasculitis	1
Nonspecific degenerative change	1
Normal kidney	12
No renal tissue	6
TOTAL	129

Results

Table 1 lists the primary histologic diagnoses in all 129 renal biopsies performed on adult patients at the University of Michigan Medical Center during the 3½-year period studied. Table 2 lists the diagnoses based on microscopic findings in the 65 patients with the nephrotic syndrome. The prevalence of the major histologic diagnoses found in this group is given in Table 3. A preponderance of membranous glomerulonephritis, proliferative glomerulonephritis, lupus nephritis, membranoproliferative glomerulonephritis, and normal renal tissue was found. The term glomerulonephritis is used in a descriptive sense and should not imply any association with a previous streptococcal infection. Membranous glomerulonephritis refers to a histological pattern of thickening of the glomerular basement membranes

---

Supported by USPHS Training Grant HE 5657 from the National Heart Institute.

Doctor Weller is with the Renal Unit, Department of Internal Medicine, The University of Michigan, Ann Arbor. Doctor Bouman is affiliated with St. Mary's Hospital, Grand Rapids.

TABLE 2. Diagnoses of Biopsies of 65 Adult Patients Having the Nephrotic Syndrome

Diagnosis	Number of Patients
Proliferative glomerulonephritis	12
Chronic glomerulonephritis	1
Membranous glomerulonephritis	23
Membranous and proliferative glomerulonephritis	7
Lupus nephritis	8
Renal vein thrombosis	1
Amyloidosis	1
Intercapillary glomerulosclerosis (diffuse)	3
Normal kidney	6
Other	3
TOTAL	65

with no significant alteration in the cellular pattern. Proliferative glomerulonephritis consists of a proliferation of glomerular endothelial and/or epithelial cells and may be accompanied by an exudative infiltrate of leukocytes. When both membrane thickening and cellular proliferation are present, the lesion is listed as membranoproliferative glomerulonephritis.

In these adult patients the nephrotic syndrome occurred nearly as frequently above age 30 as below. In **Table 4** the numbers of patients having the major histologic diagnoses are grouped for age and sex. Membranous glomerulonephritis is rather evenly distributed among all age groups and between the sexes. A slight trend toward the occurrence of proliferative glomerulonephritis in the younger age groups is evident. It is apparent that the diagnosis of the type of lesion cannot be predicted prior to biopsy on the basis of either age or sex or a combination of the two.

There were 13 histologic diagnoses of lupus nephritis in the total of 129 renal biopsies performed (10%). The percentage of lupus nephritis diagnosed histologically in the patients having the nephrotic syndrome was very similar, 8 out of 65, or 12%. The percentage occurrence of lupus nephritis in patients having the nephrotic syndrome was approximately the same in each of the various age groups. Again it was found fruitless to predict the presence of lupus nephritis in these patients based on age groups.

The clinical parameters of endogenous creatinine clearance, blood pressure level, and degree of hematuria were studied to determine if their use could enable the physician to identify patients with the various types of glomerulonephritis from those having idiopathic nephrosis with normal kidney on biopsy (lipoid nephrosis). The glomerular filtration rate as measured by the creatinine clearance was found to vary from normal to clearly abnormal in each group.

Using the value of 140/90 mm Hg as the arbitrary division between hypertensive and normotensive subjects, there were both hypertensive and normotensive patients in each histologic group. Fifty per cent of patients with membranous or membranous and proliferative glomerulonephritis were hypertensive. Approximately one-third of the patients with proliferative glomerulonephritis and one-fourth of those having either lupus nephritis or idiopathic nephrosis (normal kidney on biopsy) were hypertensive.

TABLE 3. The Prevalence of the More Common Histologic Diagnoses in the Nephrotic Syndrome in the Adult

Diagnosis	Per Cent Occurrence
Proliferative glomerulonephritis	18
Membranous glomerulonephritis	35
Membranous and proliferative glomerulonephritis	11
Lupus nephritis	12
Normal kidney	9

Hematuria was absent in 4 of 12 patients with the proliferative lesion, 11 of 23 wth the membranous lesion, 2 of 7 with the combined lesion, 3 of 8 with lupus nephritis, and 4 of 6 with idiopathic nephrosis. More than 50 red blood cells per high powered field were found in the urinary sediment of only 2 patients, both of whom had proliferative glomerulonephritis.

Discussion

It is important to note the variety of histologic findings in these patients with the nephrotic syndrome. The infrequent occurrence of the minimal lesion of idiopathic nephrosis in these adults contrasts with the stated incidence of this same type of finding in childhood nephrosis.[5] Cameron[6] observed 31 such cases in 169 adult nephrotics, representing 18% in comparison to 9% in the present study. In 98 renal biopsies in adults, Kark and co-authors[7] found 11% to have no abnormality or the minimal lesion. Miller et al.[8] noted 11 patients with the minimal lesion in a group of 49 adult nephrotics which included only lipoid nephrosis or glomerulonephritis. This 22% compares with 12% having the minimal lesion in our series using a similar classification.

Further comparison of studies concerning the incidence of various histological types of glomerulonephritis in the adult nephrotic syndrome reveals considerable variation. These differences, however, are not unexpected in view of the variability of histological interpretation as reported by Fordham, et al.[9]

Earlier assumptions, such as the belief that a higher incidence of lupus nephritis would be found in younger females with the nephrotic syndrome, or an impression that the minimal glomerular lesions would be concentrated in the younger age groups, proved to be unfounded. Furthermore, it is clear that there are no diagnostically useful correlations between the type of histologic lesion found and either the absence

TABLE 4. Age and Sex Distribution of the Most Prevalent Histologic Diagnoses in Biopsies of Adult Patients Having the Nephrotic Syndrome

Age	<21 yr		21 - 30		31 - 40		>40	
Sex	Male	Female	Male	Female	Male	Female	Male	Female
Membranous glomerulonephritis	4	1	2	4	3	2	6	1
Proliferative glomerulonephritis	4	3	2	0	1	0	1	1
Lupus nephritis	0	2	2	1	1	0	0	2
Membranoproliferative glomerulonephritis	2	0	2	0	1	0	1	1
Normal kidney	0	0	2	2	1	0	1	0
Total	10	6	10	7	7	2	9	5
Total by age group	16		17		9		14	

or the presence of decreased glomerular filtration rate, hypertension, or hematuria.

The present review emphasizes the variety of histologic diagnoses found in the nephrotic syndrome. This study strongly supports the opinion that adult patients with the nephrotic syndrome should have renal biopsies performed. This is based on our observations that: (1) the histologic lesion cannot be predicted on clinical grounds, and (2) one can, on the basis of the histologic data, make therapeutic and prognostic decisions for a specific patient.

Summary

The histologic findings of 129 percutaneous renal biopsies are presented with particular attention to the diagnoses made in 65 adult patients having the nephrotic syndrome. The factors of age and sex and the clinical parameters of glomerular filtration rate, blood pressure, and hematuria were not found to be a useful guide to the histologic type of renal lesion present in the nephrotic syndrome. For both diagnostic and therapeutic purposes, therefore, it is recommended that all adult patients with the nephrotic syndrome have percutaneous renal biopsies carried out providing there are no contraindications to this procedure.

References

1. Greene, J.A., Jr., L. Lapco, and J.M. Weller: The role of kidney biopsy in modern medicine. *Michigan Medicine* 65:271, 1966.
2. Schreiner, G.E.: The nephrotic syndrome, Chapter 12, *Diseases of the Kidney*, edited by M.B. Strauss and L.G. Welt, Boston, Little, Brown and Co., 1963, p. 335.
3. Greene, J.A., Jr., R.J. Bartlett, and P.W. Gikas: The study of renal disease by renal biopsy. *Univ Mich Med Bull* 28:210, 1962.
4. Haddad, J.K., and R.L. Mani: Percutaneous renal biopsy. *Arch Intern Med* 119:157, 1967.
5. Vernier, R.L., H.G. Worthen, and R.A. Good: The pathology of the nephrotic syndrome. *J Pediat* 58:-620, 1961.
6. Cameron, J.S.: Histology, protein clearances, and response to treatment in nephrotic syndrome. *Brit Med J* 4:352, 1968.
7. Kark, R.M., C.L. Pirani, V.E. Pollak, R.C. Muercke, and J.D. Blarney: The nephrotic syndrome in adults: a common disorder with many causes. *Ann Int Med* 49:751, 1958.
8. Miller, R.B., J.T. Harrington, C.P. Ramos, A.S. Relman, and W.B. Schwartz: Long-term results of steroid therapy in adults with idiopathic nephrotic syndrome. *Am J Med* 46:919, 1969.
9. Fordham, C.C., III, J. Haseman, R. Boerner, R. Durrett, and R. Robinson: Renal biopsy in the nephrotic syndrome. *Arch Intern Med* 124:177, 1969.

DRUG THERAPY PROBLEMS

By Robert Pearson, MS
Persis Mehta, PhD
Ann Arbor

Q. What are the signs and symptoms of overdosage of the new hypnotic, flurazepam hydrochloride (Dalmane®), and what is the minimum lethal dose of the drug? (S.K., Ann Arbor).

A. *Overdosage is manifested by somnolence, confusion and coma. The toxic dose of the drug in humans is not known. In a chronic tolerance study, however, a maximum dose of 200 mg. daily was reached by 9 subjects without evidence of systemic toxicity.*

Q. What agent other than histamine is presently being investigated as a diagnostic for pheochromocytoma? (M.L., Southfield).

A. *Tyramine is a new diagnostic agent which provokes a marked pressor response when given by intravenous injection to patients with pheochromocytoma. The drug produces its hypertensive effect by releasing l-norepinephrine from tissue stores so that the catecholamine is free to act on blood vessels and heart. Tyramine is associated with significantly less morbidity than is histamine.*

Q. Is it safe to administer iodides for asthma or other illnesses during pregnancy? (J.E., Birmingham).

A. *Iodide-induced goiter with hypothyroidism has been observed in some infants whose mothers had been taking potassium iodide preparations throughout pregnancy.* (Arch. Dis. Childh. 43, *702, 1968). The mothers were all euthyroid with no thyroid enlargement in spite of being on large doses of iodides for years. Also, they had given birth in the past to other euthyroid and non-goitrous offspring while on this medication. A possible explanation for this finding is that certain individuals may have an inherent defect in thyroid hormone synthesis which is intensified by large amounts of iodide, thus resulting in a further decrease in the formation of the hormone. It should, however, be noted that iodide-induced goiter, with or without hypothyroidism, is a very rare adverse reaction of prolonged iodide therapy.*

Q. What is Daunomycin? (R.S., Warren).

A. *Daunomycin is an antitumor antibiotic isolated from cultures of* Streptomyces peucetius. *It is presently being investigated in the treatment of leukemias and other forms of neoplastic disease. Daunomycin has been shown to be chemically identical to rubidomycin, an antibiotic obtained from* Streptomyces coeruleorubidus. *The drug binds to both strands of the DNA helix thus inhibiting DNA-dependent RNA polymerase and DNA-dependent DNA polymerase. Daunomycin may produce severe toxicity manifested primarily as bone marrow depression, leukopenia and anemia even with therapeutic doses.*

Mr. Pearson is director and Doctor Mehta is associate project coordinator of the Michigan Regional Drug Information Center, University Hospital, Ann Arbor.

PROTEIN CONTENT / 7 oz. Serving*

Bean with Bacon	6.8	Green Pea with Ham (Frozen)	7.6
Beef	8.0	Hot Dog Bean	8.4
Chicken Broth	5.5	Pepper Pot	6.1
Chicken 'N Dumplings	5.8	Split Pea with Ham	10.2
Chili Beef	6.2	Vegetable Beef	5.0
Green Pea	6.9	Vegetable with Beef (Frozen)	5.4

When protein is the focal point in your patients' special diets, Campbell's Soups can be a convenient supplementary source of that essential nutrient.

* From "Nutritive Composition of Campbell's Products" which gives values of important nutritive constituents of all Campbell's Products. For your copy, write to Campbell Soup Company, Dept. 365, Camden, New Jersey 08101.

There's a soup for almost every patient and diet ...for every meal and, it's made by Campbell

sterile solution (300 mg per ml.)

Consider Lincocin®

(lincomycin hydrochloride, Upjohn)

and single-dose 2
disposable syringe
For your convenience
in 2 ml. and 10 ml. vials...
2cc. Sterile Solution No. 8055
Lincocin®
(lincomycin hydrochloride
injection)
No. 8048
10 cc. Vial Sterile Solution
Lincocin®
(lincomycin
hydrochloride injection)
Equiv. to 300 mg. per cc.
lincomycin
3 Gm. per 10 cc.
EXPIRES

©1970 by The Upjohn Company JA70-9835 MED B-4-S (KZL 5)

Upjohn THE UPJOHN COMPANY
KALAMAZOO, MICHIGAN 4

nce-popular treatment for back pains
s to have the seventh son of a seventh son
nd or walk on the patient's back.

The pain of earache was allegedly relieved by holding a hot roasted onion to the ear.

headache, a sovereign remedy was
wear a snakeskin round one's head.

A realistic approach to pain relief

Empirin'®

ompound with Codeine
hosphate gr. 1/2 No. 3

ch tablet contains:
odeine Phosphate gr. 1/2 (Warning—
ay be habit forming), Phenacetin gr. 2 1/2,
spirin gr. 3 1/2, Caffeine gr. 1/2.

eeps the promise
f pain relief

V. & Co.' narcotic products are
ss "B", and as such are available on oral
scription, where State law permits.

BURROUGHS WELLCOME & CO. (U.S.A.) INC.
Tuckahoe, N.Y.

You can't fell a redwood with a hatchet

With vitamins, too, relative needs determine the choice.

A low potency vitamin formula may be "a good thing." But when the need for vitamins is great, only a *high potency formula* will do.

THERAGRAN is often indicated as a high potency vitamin formula pre- and postoperatively, and in many patients with: arthritis, diabetes, pancreatitis, infectious disease, hepatic disease, cardiac disease, degenerative disease, osteoporosis, alcoholism, dermatologic conditions, psychiatric disorders, malabsorption syndrome, peptic ulcer, ulcerative colitis, other gastrointestinal disease, and during the menopause. Also available with minerals as THERAGRAN-M.

Theragran®

High Potency Vitamin Formula

Theragran®-M

High Potency Vitamin Formula with Minerals

SQUIBB

'The Priceless Ingredient of every product
is the honor and integrity of its maker.'™

© E.R. Squibb & Sons, Inc. 1970

A
BUILDING BLOCK
TO RECOVERY

"Welcome back, Ann"
As adjunctive therapy
DOUBLE STRENGTH
Orenzyme®
Bitabs
One tablet q.i.d.
Trypsin: 100,000 N.F. Units, Chymotrypsin: 8,000 N.F. Units; equivalent in tryptic activity to 40 mg. of N.F. trypsin
Reduces swelling
Hastens healing
Speeds recovery
trauma
One tablet q.i.d.

Indications: When used as adjunctive therapy for the rapid resolution of inflammation and edema, good results have been obtained in:

☐ Accidental Trauma ☐ Postoperative Tissue Reactions.

Other conventional measures of treatment should be used as indicated. In infection, appropriate anti-infective therapy should be given.

Contraindications: ORENZYME BITABS should not be given to patients with a known sensitivity to trypsin or chymotrypsin.

Precautions: It should be used with caution in patients with abnormality of the blood clotting mechanism such as hemophilia, or with severe hepatic or renal disease. Safe use in pregnancy has not been established.

Adverse Reactions: Adverse reactions with ORENZYME have been reported infrequently. Reports include allergic manifestations (rash, urticaria, itching), gastrointestinal upset and increased speed of dissolution of animal-origin surgical sutures. There have been isolated reports of anaphylactic shock, albuminuria and hematuria. Increased tendency to bleed has also been reported but, in controlled studies, it has been seen with equal incidence in placebo-treated groups. (See Precautions.) It is recommended that if side effects occur medication be discontinued.

Dosage: One tablet q.i.d.

THE NATIONAL DRUG COMPANY
DIVISION OF RICHARDSON-MERRELL INC.
PHILADELPHIA, PENNSYLVANIA 19144
TRADEMARK: BITABS U.S. PATENT NO. 3,004,893 9/70 0-009A 161

Orenzyme® Bitabs

Trypsin: 100,000 N.F. Units, Chymotrypsin: 8,000 N.F. Units; equivalent in tryptic activity to 40 mg. of N.F. trypsin

The causes of vaginitis are multiple

Trichomonads . . . monilia . . . bacteria
You can depend on AVC—comprehensive therapy that combats all three major vaginal pathogens, alone or in combination.

AVC
Cream (aminacrine hydrochloride 0.2%, sulfanilamide 15.0%, allantoin 2.0%)

Suppositories (aminacrine hydrochloride 0.014 Gm., sulfanilamide 1.05 Gm., allantoin 0.14 Gm.)

Contraindications: Known sensitivity to sulfonamides.
Precautions/Adverse Reactions: The usual precautions for topical and systemic sulfonamides should be observed because of the possibility of absorption. Burning, increased local discomfort, skin rash, urticaria or other manifestations of sulfonamide toxicity are reasons to discontinue treatment.
Dosage: One applicatorful or one suppository intravaginally once or twice daily.
Supplied: Cream—Four-ounce tube with or without applicator. Suppositories—Box of 12 with applicator.
TRADEMARK: AVC AV-104 2/71 Y-149

THE NATIONAL DRUG COMPANY
DIVISION OF RICHARDSON MERRELL INC
PHILADELPHIA, PENNSYLVANIA 19144

AVC
The treatment is singular

About doctors

Bradley T. Barnes, MD, Rochester,

is the recipient of the outstanding young doctor award presented by the Rochester Jaycees. Doctor Barnes, 35, was honored for his volunteer service to the community. Chief of pediatrics at Crittenton Hospital, Barnes is also active in the PTA, YMCA, local drug programs and the First Congregational Church.

John V. Fopeano, MD, Kalamazoo,

received a citation from the Kalamazoo Academy of Medicine at its February meeting "for his continuing interest in the scientific and social progress of medicine." He was honored as "Kalamazoo's Senior Medical Statesman."

William Haeck, MD, Grand Rapids,

was re-elected chairman of the Kent County Health Board recently.

Roy Highsmith, MD,

currently a U.S. Army Colonel at Aberdeen Proving Grounds, is newly-appointed Lenawee County Health Department director, effective April 1.

Raymond Monto, MD, Detroit,

was aboard the American Hospital ship S. S. HOPE as it sailed in January to Jamaica, inaugurating the ship's second decade of service. Doctor Monto is in the first rotation group of physicians to staff the ship in its ninth visit to the West Indies.

Maurice H. Seevers, MD,

professor and chairman of The University of Michigan Department of Pharmacology, is one of nine presidential appointees to the newly-established National Commission on Marijuana and Drug Abuse. Doctor Seevers is one of four physicians on the commission.

Vernon A. Stehman, MD, Lansing,

became acting superintendent at Ypsilanti State Hospital March 1, appointed to succeed Alexander P. Dukay, MD, who resigned. Doctor Stehman has been with the central office of the Department of Mental Health for the last 15 years.

Frederick C. Swartz, MD, Lansing,

chairman, AMA Subcommittee on Aging, will officially greet physicians attending the opening ceremonies of the AMA Conference on Long-Term Care April 25 at The Drake Hotel, Chicago.

George Thompson, MD,

chief of rheumatology, Wayne County General Hospital, is new president of the Michigan Rheumatism Society. Gilbert Galens, MD, Birmingham, is vice president, and Howard Duncan, MD, Detroit, secretary-treasurer.

Alfred H. Whittaker, MD, Detroit,

is the 1971 recipient of the Detroit Historical Museum's annual Patriotic Award. Doctor Whittaker is honored for his work in medical historical scholarship and for the museum. He sponsors Wayne State University's Whittaker Annual History Award and also has compiled an especially notable Dickens collection.

Arnold M. Weissler, MD,

has been named chairman of the Department of Internal Medicine of Wayne State University's School of Medicine and chief of medicine at Harper Hospital, Detroit. It is the first time that one man has been named to both posts. Doctor Weissler, professor of medicine at Ohio State University, will assume his new duties about July 1.

THE FINEST NAME IN MEDICAL - DENTAL ARTS

THE DAVID WHITNEY BUILDING

WOODWARD AT GRAND CIRCUS PARK AND WASHINGTON BOULEVARD

IMMEDIATE OCCUPANCY • VARIOUS SIZE SUITES AVAILABLE

THE DAVID WHITNEY BUILDING CONTAINS DETROIT'S FINEST MEDICAL, DENTAL AND X-RAY LABORATORIES PLUS A PHARMACY FOR YOUR CONVENIENCE, LOCATED MINUTES FROM THE NEW DETROIT MEDICAL CENTER. • AUTOMATIC ELEVATORS • BARBER SHOP • SNACK SHOP • BANK • COMPLETE BUILDING SECURITY • FINEST PERSONALIZED JANITORIAL AND MAINTENANCE INCLUDED • ADJACENT TO LARGE PARKING GARAGE • SPECIAL RATES TO NEW DOCTORS

hayman management company 962-3058

2
3
4
5
6

the night shift of depression... insomnia

Depression is a 24-hour-a-day problem. And insomnia is often its nocturnal expression. In fact, insomnia may be a key symptom in establishing the diagnosis of depression.

ELAVIL HCl (Amitriptyline HCl, MSD) may prove quite helpful when you have arrived at such a diagnosis. Unlike psychic energizers or agents that merely elevate mood, ELAVIL HCl embodies a mild antianxiety action which manifests itself even before the fundamental antidepressant activity of the drug becomes evident. Daytime drowsiness occurs in some patients, usually within the first few days of therapy.

NOTE: Not recommended during the acute recovery phase following myocardial infarction. Patients with cardiovascular disorders should be watched closely; arrhythmias, sinus tachycardia, and prolongation of the conduction time have been reported, particularly with high doses; myocardial infarction and stroke have been reported with drugs of this class. Close supervision is required for hyperthyroid patients or those receiving thyroid medication. Concurrent electroshock therapy may increase the hazards of therapy; such treatment should be limited to patients for whom it is essential. Discontinue the drug several days before elective surgery if possible.

Contraindications: Known hypersensitivity. Should not be given concomitantly with or within at least 14 days following the discontinuance of a monoamine oxidase inhibitor. Then initiate dosage of amitriptyline HCl cautiously with gradual increase in dosage until optimum response is achieved. Not recommended during the acute recovery phase following myocardial infarction or for patients under 12 years of age.
Warnings: May block the antihypertensive action of guanethidine or similarly acting compounds. Should be used with caution in patients with a history of seizures or urinary retention, or with narrow-angle glaucoma or increased intraocular pressure. Patients with cardiovascular disorders should be watched closely; arrhythmias, sinus tachycardia, and prolongation of the conduction time have been reported, particularly with high doses; myocardial infarction and stroke have been reported with drugs of this class. Close supervision is required for hyperthyroid patients or those receiving thyroid medication. May impair mental and/or physical abilities required for performance of hazardous tasks, such as operating machinery or driving a motor vehicle. Safe use during pregnancy and lactation has not been established; in pregnant patients, nursing mothers, or women who may become pregnant, weigh possible benefits against possible hazards to mother and child.
Precautions: When used to treat the depressive component of schizophrenia, psychotic symptoms may be aggravated; in manic-depressive psychosis, depressed patients may experience a shift toward the manic phase, and paranoid delusions, with or without associated hostility, may be exaggerated; in any of these circumstances, it may be advisable to reduce the dose of amitriptyline HCl, or to use a major tranquilizing drug, such as perphenazine, concurrently. When given with anticholinergic agents or sympathomimetic drugs, close supervision and careful adjustment of dosages are required. May enhance the response to alcohol and the effects of barbiturates and other CNS depressants. The possibility of suicide in depressed patients remains during treatment and until significant remission occurs; this type of patient should not have easy access to large quantities of the drug. Concurrent electroshock therapy may increase the hazards of therapy; such treatment should be limited to patients for whom it is essential. Discontinue the drug several days before elective surgery if possible.
Adverse Reactions: *Note:* Included in this listing are a few adverse reactions not reported with this specific drug. However, pharmacological similarities among the tricyclic antidepressant drugs require that each reaction be considered when amitriptyline is administered.
Cardiovascular: Hypotension, hypertension, tachycardia, palpitation, myocardial infarction, arrhythmias, heart block, stroke. *CNS and Neuromuscular:* Confusional states; disturbed concentration; disorientation; delusions; hallucinations; excitement; anxiety; restlessness; insomnia; nightmares; numbness, tingling, and paresthesias of the extremities; peripheral neuropathy; incoordination; ataxia; tremors; seizures; alteration in EEG patterns; extrapyramidal symptoms. *Anticholinergic:* Dry mouth, blurred vision, disturbance of accommodation, constipation, paralytic ileus, urinary retention, dilatation of urinary tract. *Allergic:* Skin rash, urticaria, photosensitization, edema of face and tongue. *Hematologic:* Bone marrow depression including agranulocytosis, eosinophilia, purpura, thrombocytopenia. *Gastrointestinal:* Nausea, epigastric distress, vomiting, anorexia, stomatitis, peculiar taste, diarrhea, parotid swelling. *Endocrine:* Testicular swelling and gynecomastia in the male, breast enlargement and galactorrhea in the female, increased or decreased libido. *Other:* Dizziness, weakness, fatigue, headache, weight gain or loss, increased perspiration, urinary frequency, mydriasis, drowsiness, jaundice. *Withdrawal Symptoms:* Abrupt cessation of treatment after prolonged administration may produce nausea, headache, and malaise; these are not indicative of addiction.
How Supplied: Tablets containing 10 mg and 25 mg amitriptyline HCl, in single-unit packages of 100 and bottles of 100, 1000, and 5000; tablets containing 50 mg amitriptyline HCl, in single-unit packages of 100 and bottles of 100 and 1000; for intramuscular use, in 10-cc vials containing per cc: 10 mg amitriptyline HCl, 44 mg dextrose, and 1.5 mg methylparaben and 0.2 mg propylparaben as preservatives.

For more detailed information, consult your MSD representative or see the Direction Circular. Merck Sharp & Dohme, Division of Merck & Co., Inc., West Point, Pa. 19486

when the diagnosis is depression

ELAVIL® HCl
(AMITRIPTYLINE HCl | MSD)

MSD MERCK SHARP & DOHME

Michigan Authors

Roger Boles, MD, Ann Arbor, "What's New in Surgery—Otorhinolaryngology," page 229, *Surgery, Gynecology and Obstetrics,* February 1971.

Adil S. Chafour, MD, Dayton, Ohio, and William B. Martin, MD, Kalamazoo, "Carotid Sinus Nerve Stimulator in Angina Pectoris; report of a case," page 141, *The Ohio State Medical Journal,* February, 1971.

E. A. Nol, MD, Pontiac, "Methadone Program Problems," a letter, page 1158, *Journal of the American Medical Association,* Feb. 15, 1971.

E. F. Domino, MD, Ann Arbor, "Chloral Hydrate Potentiates Anticoagulants," a letter, page 1160, *Journal of the American Medical Association,* Feb. 15, 1971.

D. E. Szilagyi, MD, Detroit, "Hypertension after Aortic Endarterectomy," questions and answers, page 1163, *Journal of the American Medical Association,* Feb. 15, 1971.

I. J. Schatz, MD, Detroit, "Extremity Red Streaks and the Pill," questions and answers, page 1164, *Journal of the American Medical Association,* Feb. 15, 1971.

Isadore Lampe, MD, Ann Arbor, "Radiotherapeutic Principles and Viewpoints," page 959, *Journal of the American Medical Association,* Feb. 8, 1971.

D. F. Huelke, MD, Ann Arbor, "Automotive Medicine," a letter, page 985, *Journal of the American Medical Association,* Feb. 8, 1971.

Maurice S. Reizen, MD, Lansing, "What the Seventies will Reveal in Medical Care," page 6, *Michigan Hospitals,* January, 1971.

Frederick H. Epstein, MD, Ann Arbor, "Multiple Risk Factors and the Prediction of Coronary Heart Disease," page 35, *Journal of the Georgia Medical Association,* February, 1971.

The March issue . . .
of *Michigan Medicine* contains interesting articles on The Michigan Physician and his education through face to face contacts and technical media, a report by the MSMS Judicial Commission on professional ideals and a discussion by MSMS director Warren F. Tryloff of the reorganization of the MSMS staff. Did you read them?

Brief Summary of Prescribing Information— 9-9/22/69. For complete information consult Official Package Circular.
Indications: Essential hypertension. Use cautiously in patients with renal insufficiency, particularly if they are digitalized.
Contraindications: Anuria, oliguria, active peptic ulceration, ulcerative colitis, severe depression or hypersensitivity to its components contraindicates the use of Salutensin.
Warnings: Small-bowel lesions (obstruction, hemorrhage, perforation and death) have occurred during therapy with enteric-coated formulations containing potassium, with or without thiazides. Such potassium formulations should be used with Salutensin only when indicated and should be discontinued immediately if abdominal pain, distension, nausea, vomiting or gastrointestinal bleeding occurs. Use cautiously, and only when deemed essential, in fertile, pregnant or lactating patients. *Use in Pregnancy:* Thiazides cross the placenta and can cause fetal or neonatal hyperbilirubinemia, thrombocytopenia, altered carbohydrate metabolism and possibly electrolyte disturbances. Fatal reactions may occur with reserpine during electroshock therapy; discontinue Salutensin 2 weeks before such therapy. Increased respiratory secretions, nasal congestion, cyanosis and anorexia may occur in infants born to reserpine-treated mothers.
Precautions: Azotemia, hypochloremia, hyponatremia, hypochloremic alkalosis and hypokaliemia (especially with hepatic cirrhosis and corticosteroid therapy) may occur, particularly with pre-existing vomiting and diarrhea. Potassium loss or protoveratrine A may cause digitalis intoxication. ***Potassium loss responds to potassium-rich foods, potassium chloride or, if necessary, discontinuation of therapy. Stop therapy if protoveratrine A induces digitalis intoxication.*** Serum ammonia elevation may precipitate coma in precomatose hepatic cirrhotics. Discontinue therapy 2 weeks before surgery or if myocardial irritability, progressive azotemia or severe depression occur. Exercise caution in patients with chronic uremia, angina pectoris, coronary thrombosis or extensive cerebral vascular disease ***or bronchial asthma*** and in those with a history of peptic ulceration or bronchial asthma; in post-sympathectomy patients; in patients on quinidine; and in patients with gallstones, in whom biliary colic may occur. Patients who have diabetes mellitus or who are suspected of being prediabetic should be kept under close observation if treated with this agent.
Adverse Reactions: Hydroflumethiazide: Skin rashes (including exfoliative dermatitis), skin photosensitivity, urticaria, necrotizing angiitis, xanthopsia, granulocytopenia, aplastic anemia, orthostatic hypotension (potentiated with alcohol, barbiturates or narcotics), allergic glomerulonephritis, acute pancreatitis, liver involvement (intrahepatic cholestatic jaundice), purpura plus or minus thrombocytopenia, hyperuricemia, hyperglycemia, glycosuria, malaise, weakness, dizziness, fatigue, paresthesias, muscle cramps, skin rash, epigastric distress, vomiting, diarrhea and constipation. *Reserpine:* Depression, peptic ulceration, diarrhea, Parkinsonism, nasal stuffiness, dryness of the mouth, weight gain, impotence or decreased libido, conjunctival injection, dull sensorium, deafness, glaucoma, uveitis, optic atrophy, and, with overdosage, agitation, insomnia and nightmares. *Protoveratrine A:* Nausea, vomiting, cardiac arrhythmia, prostration, blurring vision, mental confusion, excessive hypotension and bradycardia. (Treat bradycardia with atropine and hypotension with vasopressors.)
Usual Dose: 1 tablet b.i.d.
Supplied: Bottles of 60, 600, and 1000 scored 50 mg. tablets.

Salutensin®
hydroflumethiazide, 50 mg./reserpine, 0.125 mg. protoveratrine A, 0.2 mg.

BRISTOL
BRISTOL LABORATORIES
Division of Bristol-Myers Company
Syracuse, New York 13201

The antihypertensive therapy that is easy to live with.*

When successive blood pressure readings confirm essential hypertension, consider Salutensin for:

Easy-to-live-with control. Gradual reduction of blood pressure leading to decisive, comfortable control is the common clinical response.

*Salutensin is usually well-tolerated (however, serious side effects can occur; see adjacent column for brief summary of prescribing information).

Easy-to-live with dosage. Two tablets a day usually achieves control. One to two tablets a day often maintains control without need for additional antihypertensive agents.

Easy-to-live with cost of therapy. The one to two tablets a day maintenance dose makes Salutensin economical to stay with. Important, because long-term control calls for long-term therapy.

Salutensin®

hydroflumethiazide, 50 mg./reserpine, 0.125 mg. protoveratrine A, 0.2 mg.

His makeup is unique by tradition.

His ulcer treatment is unique by tradition, too.

In the world of entertainment, a clown's makeup remains the exclusive property of its originator. Time has established that tradition. In the treatment of ulcers and other gastrointestinal complaints, time has established Pro-Banthīne as a tradition too.

Few drugs can boast a longer successful run. Introduced 17 years ago, this drug is a veteran gastrointestinal performer.

Pro-Banthīne stars in the treatment of peptic ulcer, functional gastrointestinal disturbances, ulcerative colitis, hypertrophic gastritis, pylorospasm, acute and chronic pancreatitis, diverticulitis, biliary dyskinesia, hyperhidrosis, ileostomies, and colonic, ureteral or urinary bladder spasm. Its fame as an anticholinergic is worldwide.

When you want a performer you can count on . . . remember Pro-Banthīne. Tradition does.

SEARLE Research in the service of medicine
G. D. Searle & Co., Chicago, Ill. 60680

Pro·Banthīne®

(propantheline bromide)

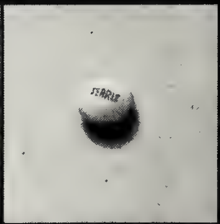
the traditional ulcer treatment

Pro-Banthīne 15 mg.
propantheline bromide

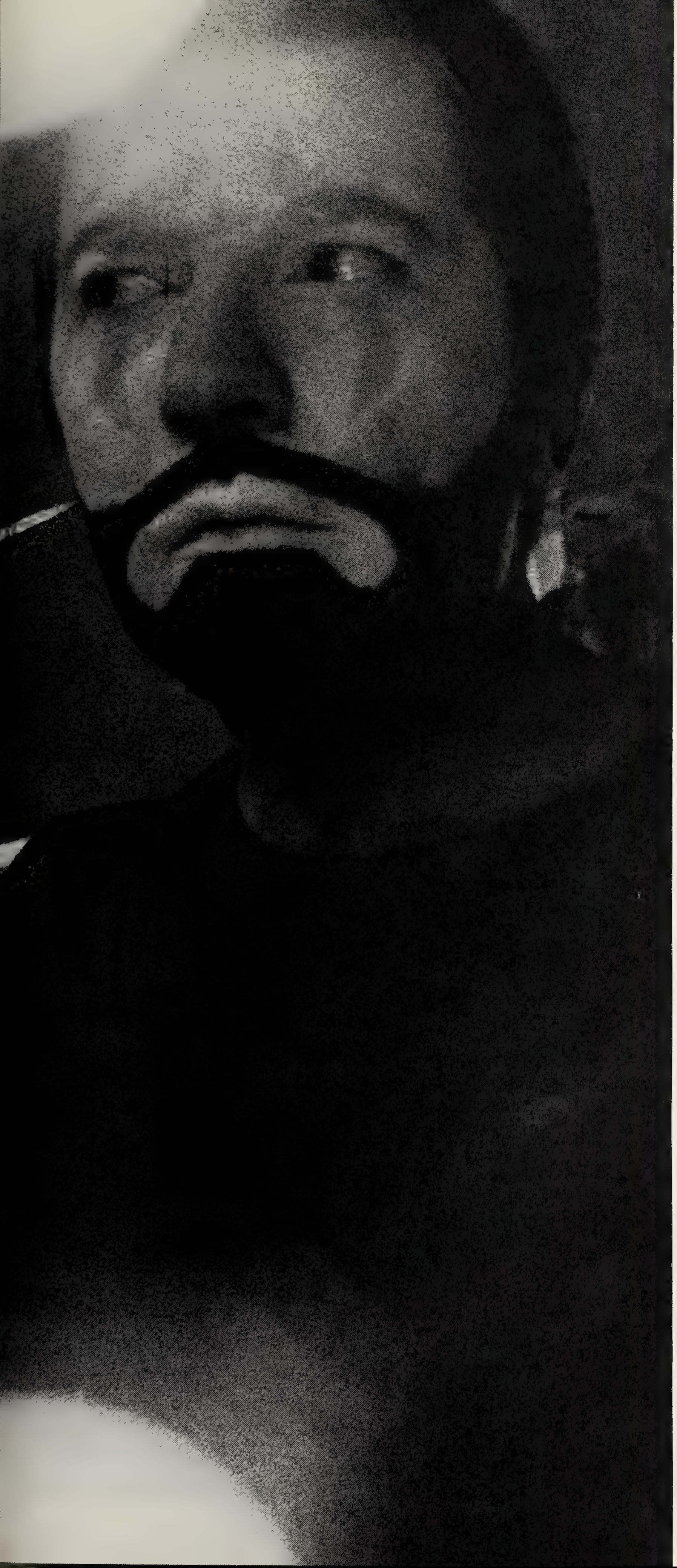
Pro-Banthīne 15 mg.
propantheline bromide
with
Dartal 5 mg.
thiopropazate
dihydrochloride

Pro-Banthīne 15 mg.
propantheline bromide
with
Phenobarbital 15 mg.
warning:
may be habit forming

Pro-Banthīne P.A. 30 mg.
propantheline bromide
in time-release form



Pro-Banthīne 7½ mg.
propantheline bromide
Half Strength



Pro·Banthīne®
(propantheline bromide)

Indications: Peptic ulcer, gastroenteritis, pylorospasm, biliary dyskinesia, functional hypermotility and irritable colon.
Contraindications: Glaucoma, severe cardiac disease.
Precautions: Since varying degrees of urinary hesitancy may occur in elderly men with prostatic hypertrophy, this should be watched for in such patients until they have gained some experience with the drug. Although never reported, theoretically a curare-like action may occur with possible loss of voluntary muscle control. Such patients should receive prompt and continuing artificial respiration until the drug effect has been exhausted.
Side Effects: The more common side effects, in order of incidence, are xerostomia, mydriasis, hesitancy of urination and gastric fullness.
Dosage: The maximal tolerated dosage is usually the most effective. For most adult patients this will be four to six 15-mg. tablets daily in divided doses. In severe conditions as many as two tablets four to six times daily may be required. Pro-Banthīne is supplied as tablets of 15 mg., as prolonged-acting tablets of 30 mg. and, for parenteral use, as serum-type vials of 30 mg. The parenteral dose should be adjusted to the patient's requirement and may be up to 30 mg. or more every six hours, intramuscularly or intravenously.

Pro-Banthīne® 15 mg.
(propantheline bromide)
with
Dartal® 5 mg.
(thiopropazate dihydrochloride)

Indications: Peptic ulcer, spastic constipation, nonspecific gastritis, functional gastrointestinal disorders, pylorospasm, hyperhidrosis, irritable bowel syndrome, mucous or ulcerative colitis, functional diarrhea.
Contraindications: Glaucoma, severe cardiac disease.
Warnings: Pro-Banthīne with Dartal should not be administered to patients who are under the influence of barbiturates, alcohol or narcotics. The drug should be administered cautiously to epileptic patients or those in depressed states, patients with liver disease and to pregnant women. Hypersensitivity to Dartal may occur rarely in patients with known sensitivity to similar drugs.
Side Effects: Dryness of the mouth, mydriasis, hesitancy of urination; less commonly extrapyramidal (restlessness, dystonia and signs of pseudoparkinsonism such as muscular rigidity, fixed facies, tremor, ataxia, festinant gait and drooling), parasympatholytic (blurred vision, xerostomia, hypotension, nasal congestion and constipation) and curare-like (loss of control of voluntary muscles, particularly the muscles of respiration) reactions. Rarely, leukopenia or allergic purpura. A generalized erythematous skin reaction may occur. Side effects characteristic of phenothiazines such as grand mal convulsions, altered cerebrospinal proteins, cerebral edema, potentiation of the effects of atropine, heat or phosphorus insecticides, autonomic reactions, endocrine disturbances, reversed epinephrine effect, hyperpyrexia or pigmentary retinopathy may theoretically occur but have not been reported with Dartal. Severe hypotension following recommended doses occurs more commonly in patients who are also afflicted by other medical disorders such as mitral insufficiency or pheochromocytoma, and particular attention should be paid to such a possibility although this has not been observed with Dartal.
Adult Dosage: One tablet three times a day.

Pro-Banthīne® 15 mg.
(propantheline bromide)
with
Phenobarbital 15 mg.
Warning: May be habit-forming.
For *Indications, Contraindications, Precautions, Side Effects* and *Dosage* see Pro-Banthīne. In addition, phenobarbital should be administered with caution to patients with liver disease, mental disturbances or a significant degree of hypoxia.

Pro-Banthīne P.A.®
prolonged acting brand of propantheline bromide
For *Indications, Contraindications, Precautions* and *Side Effects* see Pro-Banthīne.
Dosage Form: Capsule-shaped, compression-coated, peach tablets of 30 mg. for oral use.
Dosage: The recommended initial dosage is one tablet in the morning and one at night.

084

SEARLE
Research in the service of medicine.
G. D. Searle & Co., Chicago, Ill. 60680

MSMS news

Michigan Mediscene

April 13-14—Michigan Licensed Practical Nurses Conference, Kellogg Center, Michigan State University, contact: Mrs. Ivon D. Barrett, executive director, MLPNA, 5900 Executive Drive, Lansing, 48910

April 14-15—10th Annual Michigan Conference on Maternal and Perinatal Welfare, Olds Plaza Hotel, Lansing, contact: Miss Helen Schulte, MSMS Headquarters

April 18-21—Michigan Dental Association, annual meeting, Statler Hilton Hotel, Detroit, contact: Marc W. Brown, executive assistant, MDA, 430 Stoddard Bldg., Lansing, 48933

April 19-21—Clinical Pharmacology with Emphasis on Newer Drugs, American College of Physicians, University of Michigan Medical School, Ann Arbor, contact: Edward A. Carr, MD, director

April 21—Michigan Allergy Society, 5:30 p.m., Mercy College of Detroit Student Union Building, 8200 Outer Drive, contact: John Lesesne, MD, president, MAS, 17770 Mack Ave., Grosse Pointe, 48224

April 21—Michigan League for Nursing, annual conference, Hospitality Inn, Lansing, contact: Mrs. Marguerite Murray, RN, executive director, MLN, Room 314, 41 W. Warren Ave., Detroit, 48201

April 21—MSMS Council, 9:30 a.m., MSMS Headquarters, East Lansing, contact: Warren F. Tryloff, MSMS director

April 22—Sixth Annual MSMS Conference on Medical Aspects of High School Sports, Kellogg Center, MSU, East Lansing, contact: James Feurig, MD, Olin Health Center, MSU, East Lansing, 48823

April 27-28—Spring Mental Health Meeting, sponsored by Michigan Society for Mental Health, MSU College of Human Medicine, Department of Psychiatry and Continuing Education Service, at Kellogg Center, MSU, contact: Harold Drain, PhD, Department of Psychiatry, MSU, East Lansing, 48823

April 28-29—Annual Meeting, Michigan Dietetic Association, Grand Rapids, contact: Mrs. Shirley O'Connell, Visiting Nurse Association, 4421 Woodward Ave., Detroit, 48201

April 28-29—Spring Conference of the Woman's Auxiliary to MSMS, Sheraton Motor Inn, Pontiac, contact: Mrs. F. P. Rhoades, 272 Ashland Ave., Detroit, 48205

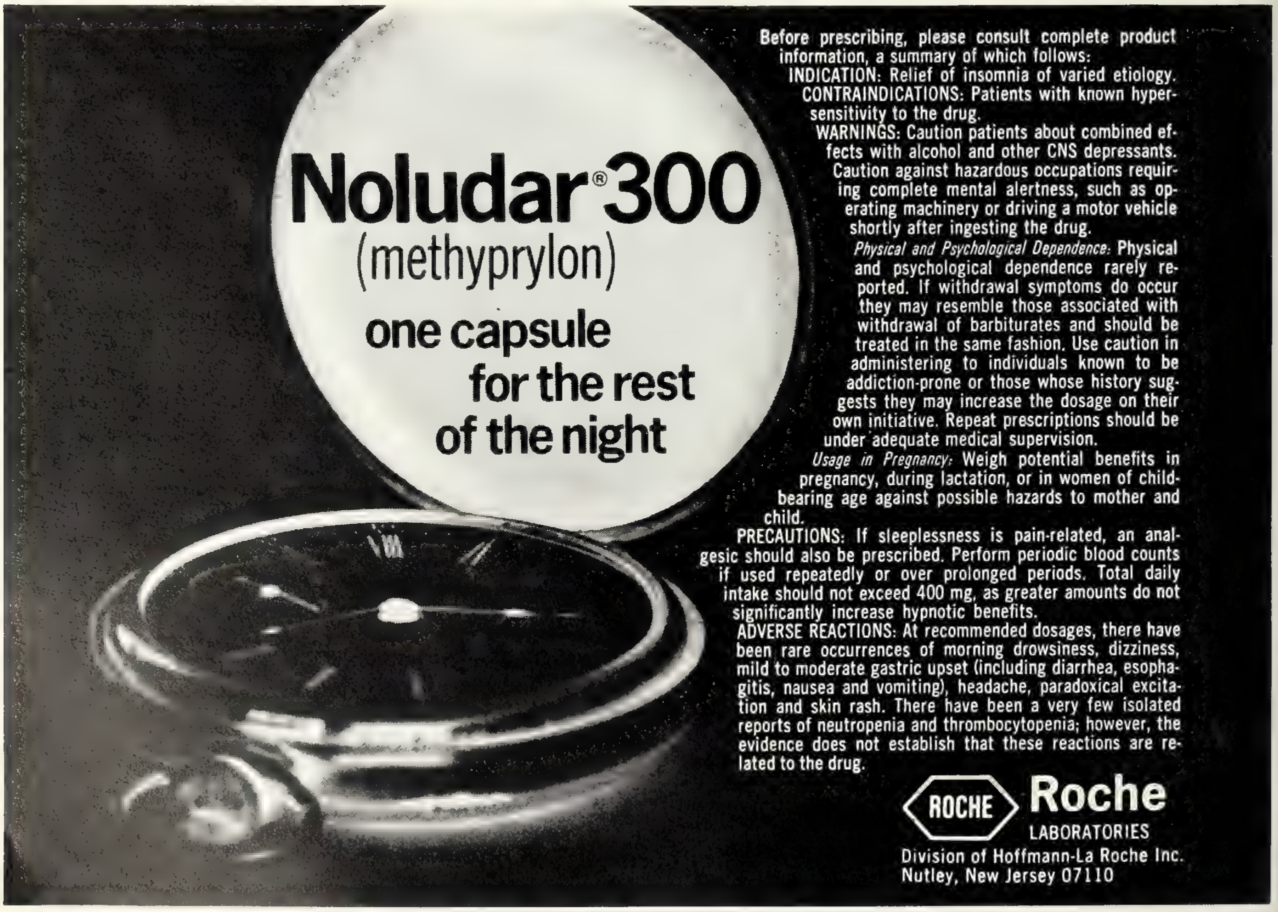
April 29-May 1—Annual Scientific Sessions and Heart Days, Michigan Heart Association, Cobo Hall and the Pontchartrain Hotel, Detroit, contact: David Ballinger, MHA director of field services, 13100 Puritan, Detroit, 48227

April 30-May 2—Annual meeting, Michigan State Medical Assistants Society, Weber's Motor Inn, Ann Arbor, contact: Mrs. Patricia Austin, 216 Michigan Theatre Bldg., Ann Arbor, Mich. 48108.

May 2—Board meeting, Michigan Academy of General Practice, 2 p.m., MSMS Headquarters, contact: James F. Dooley, MD, president, 3210 S. Dort Highway, Flint, 48507

May 12—Wayne State University School of Medicine Alumni Clinic Day, Sheraton-Cadillac Hotel, Detroit, theme: "Environmental Health, with emphasis on the medical aspects of the ecology," contact: Alan J. Hitsky, Information Services, Wayne State University, Detroit, 48202

May 19—Michigan Allergy Society Annual Meeting, Ann Arbor, contact: John Lesesne, MD, president, MAS, 17770 Mack Ave., Grosse Pointe, 48224.



Before prescribing, please consult complete product information, a summary of which follows:

INDICATION: Relief of insomnia of varied etiology.

CONTRAINDICATIONS: Patients with known hypersensitivity to the drug.

WARNINGS: Caution patients about combined effects with alcohol and other CNS depressants. Caution against hazardous occupations requiring complete mental alertness, such as operating machinery or driving a motor vehicle shortly after ingesting the drug.

Physical and Psychological Dependence: Physical and psychological dependence rarely reported. If withdrawal symptoms do occur they may resemble those associated with withdrawal of barbiturates and should be treated in the same fashion. Use caution in administering to individuals known to be addiction-prone or those whose history suggests they may increase the dosage on their own initiative. Repeat prescriptions should be under adequate medical supervision.

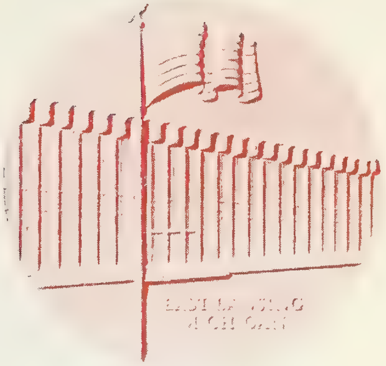
Usage in Pregnancy: Weigh potential benefits in pregnancy, during lactation, or in women of child-bearing age against possible hazards to mother and child.

PRECAUTIONS: If sleeplessness is pain-related, an analgesic should also be prescribed. Perform periodic blood counts if used repeatedly or over prolonged periods. Total daily intake should not exceed 400 mg, as greater amounts do not significantly increase hypnotic benefits.

ADVERSE REACTIONS: At recommended dosages, there have been rare occurrences of morning drowsiness, dizziness, mild to moderate gastric upset (including diarrhea, esophagitis, nausea and vomiting), headache, paradoxical excitation and skin rash. There have been a very few isolated reports of neutropenia and thrombocytopenia; however, the evidence does not establish that these reactions are related to the drug.

ROCHE Roche
LABORATORIES
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

Council minutes



Extract of MSMS Council minutes; meeting of Feb. 3, 1971

Annual Meeting—The Council voted that an ad hoc committee be instructed to study the pros and cons of changing the date of the annual meeting of the House of Delegates and of the possibility of holding two meetings a year, to prepare a Council recommendation to the House. The matter has been referred to the Planning and Priorities Committee, Brooker L. Masters, MD, chairman.

Exhibitors' Report—The Council learned that the Medical Exhibitors Association has found that 89 percent of the exhibitors at the 1970 Annual Session gave the meeting's exhibit a favorable rating; 54 of the 61 surveyed indicated that the registrants showed interest in the exhibits, and 95 percent of the exhibitors were pleased with the traffic past their displays.

Membership Report—The Council heard that MSMS memberships, including partial-pay and non-paying categories such as military and life memberships, totaled 7,951 in 1968; 7,991 in 1969, and 8,013 in 1970.

MHC Delegates—D. R. McCorvie, MD, Williamston, and Robert E. Rice, MD, Greenville, were reappointed delegate and alternate delegate from MSMS to the Michigan Health Council.

MSMS Appointments — The Council learned of the appointments by Harold H. Hiscock, MD, Flint, MSMS president, of John W. Grigg, MD, Bay City, to the Advisory Council to Michigan State Board of Hearing Aid Dealers, and of Robert E. Rice, MD, Greenville, to the Medical Care Advisory Committee of the Michigan Department of Social Services.

A/S Coordinators—The Council deferred until 1972 the appointment of one physician to act as an adjunct to the staff in developing and revising the Annual Session program and format. For the 1971 Annual Session, John B. Bryant, MD, Royal Oak, will coordinate the scientific speakers and John W. Moses, MD, Detroit, will work with specialty societies to help organize their programs.

Medicaid Fees—After being informed of an expected reduction in Medicaid fees to physicians in the last quarter of this fiscal year, The Council decided to send a letter of protest to the governor; alert the MSMS membership to the situation, to current medical economics and to the handling of other recipients of Medicaid payments; to turn MSMS energies to correcting the situation at the national level by energetic support for an alternative to Medicaid; and to prepare a simple brochure on how patients can help hold down Medicaid costs, and urge MSMS members to distribute the brochure to all Medicaid patients.

MSMS Seal—The Council ruled that MSMS continue the use of the old seal as the "official MSMS seal," and not order any new batches of the Centennial seals.

Liability Insurance—The Council approved the recommendation of the Committee on Professional Insurance Plans that The Council pursue the concept of legislation that would place an upper limit on professional liability judgments; and referred another of the committee's recommendations, that The Council consider including medical ethics, professional liability and the business side of medical practice in the MSMS postgraduate education program, to the MSMS Postgraduate Medical Education Committee.

Rehabilitative Medicine—The Council approved the appointment of three medical students, from the WSU, MSU and U-M SAMA chapters, to the Committee on Rehabilitation, and authorized the appointment of a representative from the Michigan Society of Osteopathic Physicians and Surgeons as an advisor to the MSMS Committee on Rehabilitation.

MEDISCENE/Continued

May 19-21—Michigan Public Health Association annual meeting, Pantlind Hotel, Grand Rapids, contact: William Swanson, executive director, MPHA, 403 Seymour, Lansing, 48914

May 20—25th annual Michigan Health Congress, 9 a.m. to 4:30 p.m., Goodrich Chapel, Albion College, Albion, contact: John A. Doherty, director, Michigan Health Council, 712 Abbott Street, East Lansing, 48823

May 20-21—Annual summer meeting of MSMS Maternal and Perinatal Health Committee, Kellogg Biological Station, Gull Lake, contact: Miss Helen Schulte, MSMS Headquarters

May 21-23—Michigan Kidney Foundation annual and educational meeting, Kellogg Center, East Lansing, contact: Martin Jones, MD, 2909 E. Grand River, Lansing

May 22—16th annual All-day scientific session, Michigan Society of Anesthesiologists, Sheraton-Cadillac Hotel, Detroit, contact: Ralph E. Bauer, MD, secretary-treasurer, MSA, Henry Ford Hospital, Detroit, 48202

May 22-23—Michigan Society of Medical Technologists,

CONSTIPATION
EVACUATE GENTLY

With EVAC-U-GEN — your patients with functional constipation can evacuate gently. Because EVAC-U-GEN has a mild laxative action and tends to cause the stool to be soft — it is highly desirable for those sensitive to harsh laxatives — particularly children, pregnant women, and geriatric patients. Recommend EVAC-U-GEN for the management of functional constipation. It is highly effective. Non-griping. Chewable. Very palatable. Economical.

EVAC-U-GEN®

A highly-flavored and palatable tablet of yellow phenolphthalein, bismuth subcarbonate, bismuth subgallate in special base. Chewable. Bottles of 35 and 100. Adult Dose: Chew 1 or 2 tablets night or morning. Children (up to age 10): 1/2 tablet. A citrus drink taken with tablet will stimulate action.
PRECAUTION: Do not use when symptoms of appendicitis are present and discontinue use if skin rash appears. Dependence on laxatives can result from continued use.

W-C PRECISION PHARMACEUTICALS

SEND FOR SAMPLES.
WALKER, CORP & CO., INC.
Syracuse, New York 13201

annual and educational meeting, Kellogg Center, East Lansing, contact: Robert Brooks, School of Medical Technology, MSU, East Lansing, 48823

May 24-28—Clinical Endocrinology: Physiological Basis for Current Diagnostic and Therapeutic Procedures, American College of Physicians, U-M Medical Center, Ann Arbor, contact: Jerome W. Conn, MD, course director

May 26—MSMS Council, 9:30 a.m., MSMS Headquarters, East Lansing, contact: Warren F. Tryloff, MSMS director

May 26-28—Medical Staff-Trustee-Administrator Forum, Boyne Mountain Lodge, contact: Allan Barth, executive director, Michiagn Hospital Association, 2213 E. Grand River, Lansing, 48912

June 16—MSMS Council, noon to 5 p.m., MSMS Headquarters, East Lansing, contact: Warren F. Tryloff, MSMS director

June 20-24—Many Michigan physicians will attend the AMA Convention in Atlantic City

June 24-26—52nd annual meeting, Michigan Hospital Association, Grand Hotel, Mackinac Island, contact: H. Allan Barth, executive director, MHA, 2213 E. Grand River Ave., Lansing, 48912

July 30—Annual midsummer meeting of The MSMS Council, Boyne Highlands, contact: Warren F. Tryloff, MSMS director

Oct. 1—Michigan Hospital Association House of Delegates meeting, Park Place Motor Inn, Traverse City, contact: H. Allan Barth, executive director, MHA, 2213 E. Grand River Ave., Lansing, 48912

Oct. 3 and 6—MSMS Council, Pantlind Hotel, Grand Rapids

Oct. 3-7—1971 MSMS Annual Session, Pantlind Hotel, Grand Rapids

Oct. 5-7—1971 Annual Convention of the Woman's Auxiliary to MSMS, Pantlind Hotel, Grand Rapids

Oct. 20-21—Michigan TB and Respiratory Disease Education Meeting, Kellogg Center, East Lansing, contact: Les Harcus, Public Relations, Michigan TB and Respiratory Disease Association, 403 Seymour, Lansing

Oct. 25-29—Michigan Nurses Association Convention, Pantlind Hotel, Grand Rapids, contact: William E. Ludwig, public relations director, MNA, 120 Spartan Ave., East Lansing, 48823

Nov. 10—MSMS Council, MSMS Headquarters, East Lansing, noon to 5 p.m., contact: Warren F. Tryloff, MSMS director

Nov. 28-Dec. 1—AMA Clinical Convention, New Orleans

Dec. 8—MSMS Council, MSMS Headquarters, East Lansing, 9:30 a.m., contact: Warren F. Tayloff, MSMS director

MSMS receives many requests to reprint articles

In recent months, several requests to reprint articles or portions of articles from *Michigan Medicine* have been received at medical society headquarters, continuing the usefulness of those articles.

The January, 1971 issue of *Mental Health Digest*, put out by the National Clearinghouse for Mental Health Information, carried a condensation of the article, "Heroine Addiction: A Comparison of Two Inpatient Treatment Methods," by Maurice L. LaRouche, MD, and Patrick T. Donlon, MD, with permission from MSMS. The article first appeared in the September, 1970 issue of *Michigan Medicine.*

The Suburban Hospital Association of Bethesda, Md., wrote MSMS in January for permission to reprint "A Rural Editor Looks at Emergency Medical Service," from the May, 1968 issue of *Michigan Medicine.* The SHA will include the article in a book composed of journal pieces on the subject of ambulance services. Author of the article is John Boughton, Editor, *Nashville News.*

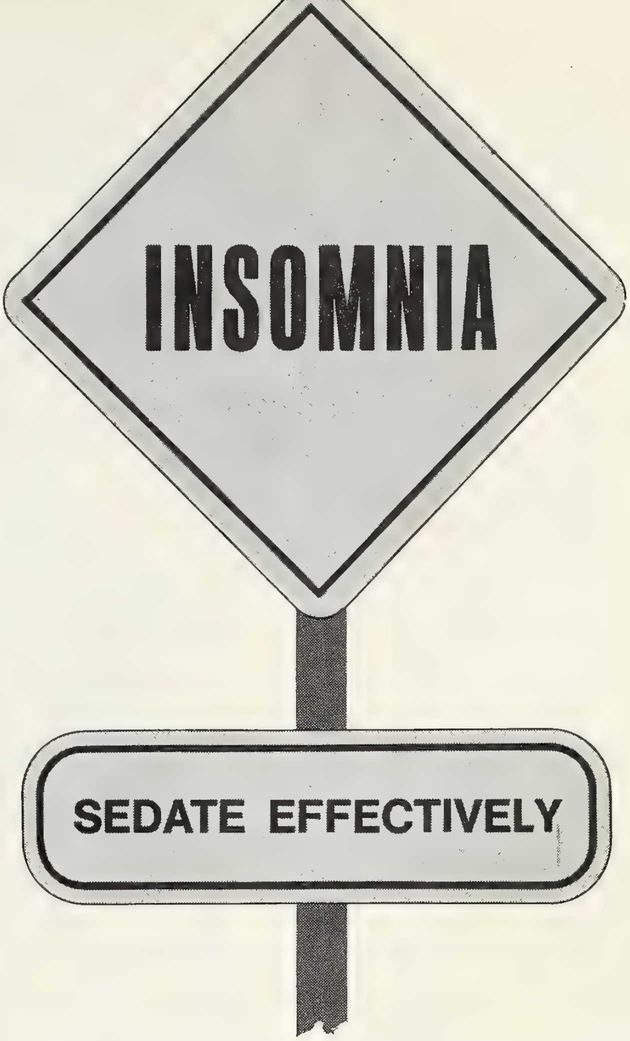
A volume of collected papers from the Seventh Annual Hospital Medical Staff Conference held in Estes Park, Colo., Sept. 28-Oct. 2, 1970, will include a reprint of an article, "The Treatment of Alcoholism in a General Hospital," by Richard C. Bates, MD, Lansing, which first appeared in *Michigan Medicine,* June, 1966. Doctor Bates presented the paper at the conference.

The editors of *Modern Medicine* wrote MSMS headquarters on Sept. 29 asking permission to abstract an article on "Chronic Granulomatous Disease of Childhood" published in *Michigan Medicine* in August, 1970. Authors are Gerald Light, MD, and Roman Knoblich, MD, both of Flint.

A portion of the article, "Cerebral Injury in the Newborn due to Anoxia at Birth," by Schreiber, F., and Gates, N., which appeared in the 1938 *Journal of the Michigan State Medical Society,* will be included in a monograph by the late Cyril B. Courville, MD, of Pasadena, Calif., entitled "Birth and Brain Damage." The material is being prepared for publication now.

A Phoenix lawyer has written MSMS asking for a copy of "Lap Seat Belt Injuries," by Schneider, et al., from the February, 1968 issue of *Michigan Medicine*; an Iowa City, Iowa man has written for a copy of "Abortion Law Reform Progress in Michigan," by Jack M. Stack, MD, which appeared in the January, 1970 issue of *Michigan Medicine,* and a medical student at the University of Leiden, the Netherlands, wrote Dec. 1 asking for a copy of a letter about myocardial infarction which appeared in the August, 1953 issue of the *Journal of the Michigan State Medical Society,* written by Mr. A. G. Kettunen of East Lansing.

It was an illustration from an article in the 1967 *Michigan Medicine* that was requested by Leslie Iffy, MD, associate professor in the Department of Obstetrics and Gynecology, The University of Illinois at the Medical Center, Chicago.



With QUĪ-A-ZONE – you can sedate effectively. A balanced combination of short, intermediate, and long-acting barbiturates (totaling 100 mg.) in a rapidly disintegrating tablet – sedation is provided within a few minutes . . . followed by sound restful sleep . . . usually without morning hangover. The four barbiturates in QUĪ-A-ZONE have dual channels of elimination (renal and hepatic) to lessen metabolic burden, decrease barbiturate retention, and minimize depression.

QUĪ-A-ZONE™

Each rapidly-disintegrating tablet contains 25 mg. secobarbital, 25 mg. pentobarbital, 25 mg. butabarbital, and 25 mg. phenobarbital. Bottles of 100.
Usual Adult Dose: 1 to 2 tablets before retiring.
PRECAUTION: Should not be administered to patients sensitive to barbiturates, or in cases of known previous addiction. Warning: May be habit forming.

W-C PRECISION PHARMACEUTICALS

SEND FOR SAMPLES.

WALKER, CORP & CO., INC.
Syracuse, New York 13201

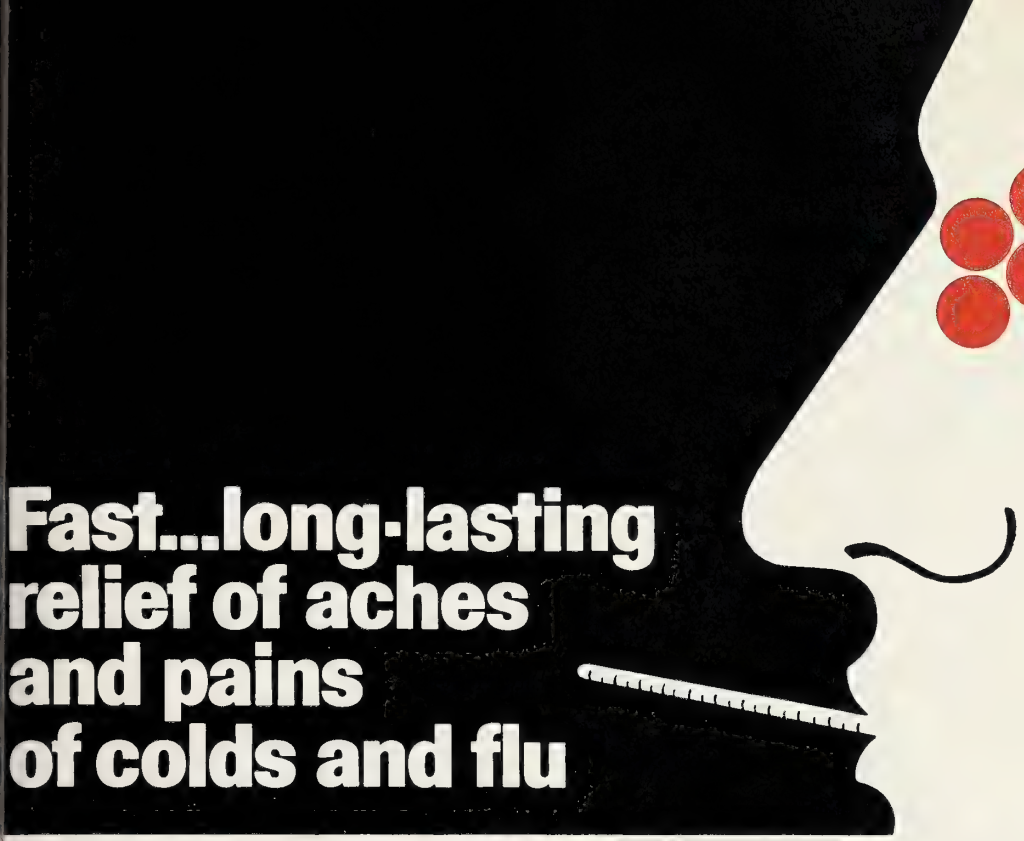
Physicians in Michigan by specialty and activity as of Dec. 31, 1969

		MAJOR PROFESSIONAL ACTIVITY								
			PATIENT CARE				OTHER PROFESSIONAL ACTIVITY			
				HOSPITAL BASED PRACTICE						
SPECIALTY	TOTAL PHYSICIANS	TOTAL	OFFICE BASED PRACTICE	Interns	Residents	Full-Time Physician Staff	Medical Teaching	Administration	Research	Other
Total Physicians	10,863	9,379	6,512	485	1,727	655	164	331	295	71
General Practice	1,831	1,797	1,670	17	46	64	2	11	13	8
Medical Specialties	2,247	2,031	1,413	57	412	149	52	49	108	7
A	74	65	59		5	1	2		7	
CD	176	148	118		14	16	6	1	19	2
D	139	126	93		31	2	4	4	5	
GE	50	39	28		5	6	2		9	
IM	1,229	1,141	745	39	281	76	17	25	44	2
PD	506	455	340	18	70	27	17	14	19	1
PDA	15	14	10		4				1	
PDC	11	9	5			4	1		1	
PUD	47	34	15		2	17	3	5	3	2
Surgical Specialties	3,076	2,952	2,121	44	689	98	40	24	52	8
GS	1,117	1,078	702	38	294	44	8	9	19	3
NS	77	76	53		19	4			1	
OBG	785	746	562	6	156	22	12	12	13	2
OPH	336	325	258		57	10	3	1	6	1
ORS	256	252	183		65	4	1	1	2	
OTO	159	146	110		36		8	1	4	
PS	52	49	36		12	1	2		1	
CRS	33	33	29		4					
TS	77	70	45		16	9	2		4	1
U	184	177	143		30	4	4		2	1
Other Specialties	3,086	2,599	1,308	367	580	344	70	247	122	48
AM	3	3	3							
AN	288	273	214		42	17	11	3	1	
CHP	77	56	25		17	14	5	11	5	
DR	37	33	20		10	3	1		1	2
FOP	6	3	2			1		1	1	1
N	79	71	34		26	11	4		4	
OM	162	139	135		1	3	2	18	3	
P	698	628	361		140	127	13	46	9	2
PTH	331	263	124	1	76	62	10	21	7	30
PM	45	42	22		9	11		3		
GPM	19	8	6		1	1	1	7	2	1
PH	77	12	4		2	6	2	53	7	3
R	374	357	229		90	38	6	4	2	5
TR	29	29	19		6	4				
Other Specialty	301	146	94		35	17	11	69	71	4
Unspecified	560	536	16	366	125	29	4	11	9	
Inactive	623									

SPECIALIZATION

Allergy	**A**
Anesthesiology	**AN**
Aviation Medicine	**AM**
Cardiovascular Disease	**CD**
Child Psychiatry	**CHP**
Colon and Rectal Surgery	**CRS**
Dermatology	**D**
Diagnostic Roentgenology	**DR**
Forensic Pathology	**FOP**
Gastroenterology	**GE**
General Practice	**GP**
General Surgery	**GS**
Internal Medicine	**IM**
Neurological Surgery	**NS**
Neurology	**N**
Obstetrics and Gynecology	**OBG**
Occupational Medicine	**OM**
Ophthalmology	**OPH**
Orthopedic Surgery	**ORS**
Otolaryngology	**OTO**
Pathology	**PTH**
Pediatrics	**PD**
Pediatric Allergy	**PDA**
Pediatric Cardiology	**PDC**
Physical Medicine and Rehabilitation	**PM**
Plastic Surgery	**PS**
Preventive Medicine (General)	**GPM**
Psychiatry	**P**
Public Health	**PH**
Pulmonary Disease	**PUD**
Radiology	**R**
Therapeutic Radiology	**TR**
Thoracic Surgery	**TS**
Urology	**U**

These figures are the latest available from the AMA and are taken from the two-volume AMA publication, *Distribution of Physicians, Hospitals, and Hospital Beds in the U.S.*



Fast...long-lasting relief of aches and pains of colds and flu

with the unique timed-release aspirin

Double strength Measurin timed-release aspirin offers a new kind of control for your patients with cold and flu discomforts. In each 10-grain tablet are over 6,000 microscopic reservoirs that release aspirin at a controlled rate—some right away and some later on. This means fast relief of symptoms, followed by hours of comfort. Throughout the day, Measurin gives your patients freedom from a 4-hour aspirin schedule. During the night, its 8-hour dosage schedule holds the promise of sound sleep without awakening to take extra tablets.

For Professional Samples write:
Breon Laboratories Inc.
Sample Fulfillment Division
P.O. Box 141
Fairview, N.J. 07022

BREON **BREON LABORATORIES INC.**
90 Park Avenue, New York, N.Y. 10016
Subsidiary of Sterling Drug Inc.

MEASURIN®
TIMED-RELEASE ASPIRIN
ECONOMICAL • EFFECTIVE • LONG LASTING PAIN RELIEF
Dosage: 2 tablets followed by 1 or 2 tablets every 8 hours as required, not to exceed 6 tablets in 24 hours. For maximum nighttime pain relief, 2 tablets at bedtime.
Available: Bottles of 12, 36 and 60 tablets.

Precision is a natural goal when you prescribe thyroid replacement therapy.

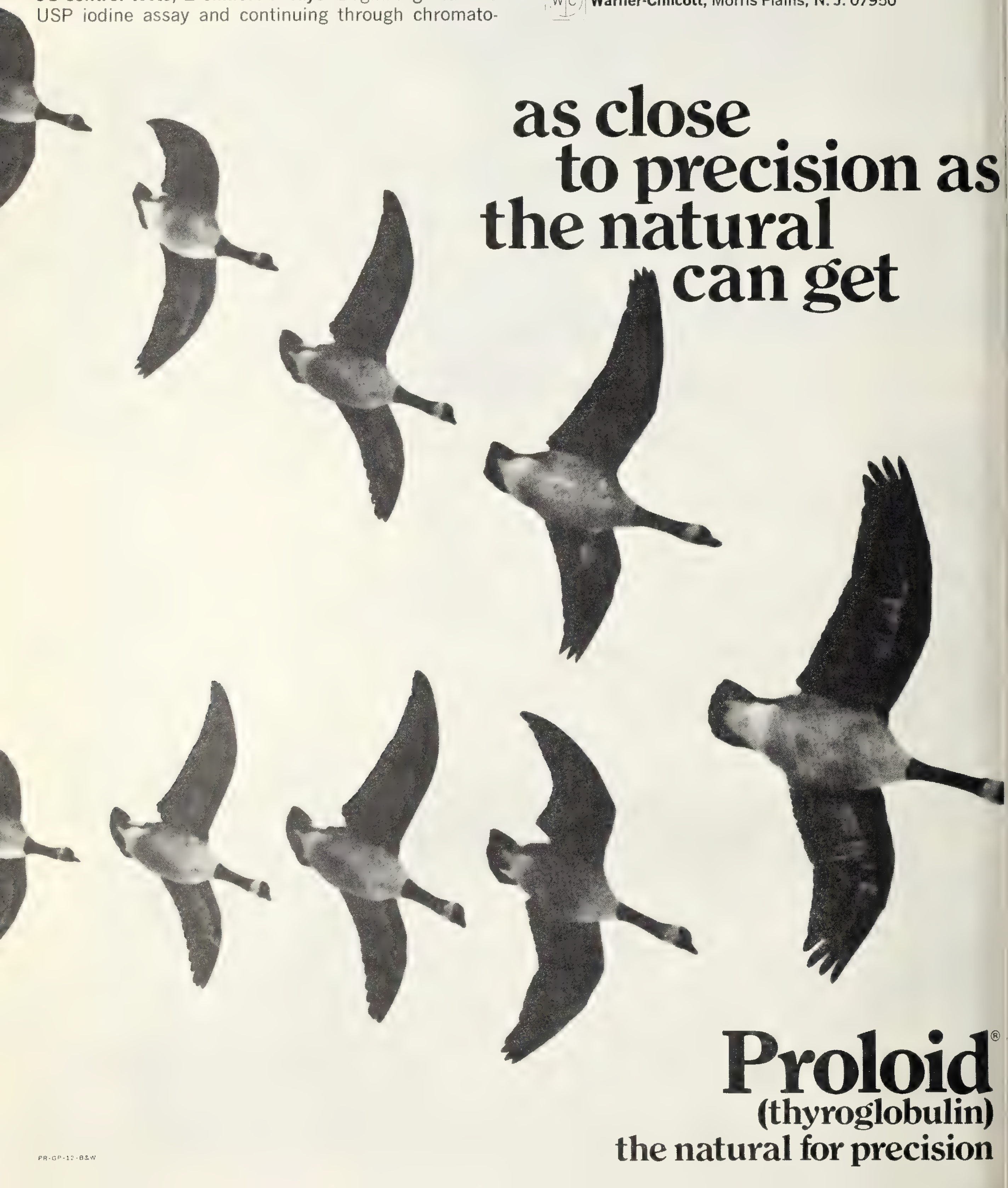
When you prescribe Proloid (thyroglobulin) you specify a precision blend of the two natural active hormones—T_4 and T_3—in their natural protein, *thyroglobulin.*

It's because Proloid is the natural thyroid hormone-globulin complex extracted and purified of unnecessary glandular debris.

91 control tests, 2 clinical assays: Beginning with the USP iodine assay and continuing through chromatographic analysis for T_4 and T_3 content and including testing in hypothyroid humans—Proloid is made as precise as the natural product can get, batch after batch.

New 2 grain tablet: Precision extends to dosage. With the introduction of a new 2 grain tablet, titration can be even more conveniently achieved with the full range of Proloid dosages: *¼, ½, 1, 1½, the new 2, 3, and 5 grain tablets.*

Warner-Chilcott, Morris Plains, N. J. 07950



PR-GP-12-B&W

Proloid® (thyroglobulin)

Description: Proloid (thyroglobulin) is obtained from a purified extract of frozen hog thyroid. It contains the known calorigenically active components, sodium levothyroxine (T_4) and sodium liothyronine (T_3). Proloid (thyroglobulin) conforms to the primary USP specifications for desiccated thyroid—for iodine based on chemical assay—and is also biologically assayed and standardized in animals.

Chromatographic analysis to standardize the sodium levothyroxine and sodium liothyronine content of Proloid (thyroglobulin) is routinely employed.

The ratio of T_4 and T_3 in Proloid (thyroglobulin) is approximately 2.5 to 1.

Proloid (thyroglobulin) is stable when stored at usual room temperature.

Indications: Proloid (thyroglobulin) is thyroid replacement therapy for conditions of inadequate endogenous thyroid production: *e.g.*, cretinism and myxedema. Replacement therapy will be effective only in manifestations of hypothyroidism.

In simple (nontoxic) goiter, Proloid (thyroglobulin) may be tried therapeutically, in non-emergency situations, in an attempt to reduce the size of such goiters.

Contraindication: Thyroid preparations are contraindicated in the presence of uncorrected adrenal insufficiency.

Warnings: Thyroglobulin should not be used in the presence of cardiovascular disease unless thyroid-replacement therapy is clearly indicated. If the latter exists, low doses should be instituted beginning at 0.5 to 1.0 grain (32 to 64 mg) and increased by the same amount in increments at two-week intervals. This demands careful clinical judgment.

Morphologic hypogonadism and nephroses should be ruled out before the drug is administered. If hypopituitarism is present, the adrenal deficiency must be corrected prior to starting the drug.

Myxedematous patients are very sensitive to thyroid, and dosage should be started at a very low level and increased gradually.

Precaution: As with all thyroid preparations this drug will alter results of thyroid function tests.

Adverse Reactions: Overdosage or too rapid increase in dosage may result in signs and symptoms of hyperthyroidism, such as menstrual irregularities, nervousness, cardiac arrhythmias, and angina pectoris.

Dosage and Administration: Optimal dosage is usually determined by the patient's clinical response. Confirmatory tests include BMR, T_3 ^{131}I resin sponge uptake, T_3 ^{131}I red cell uptake, Thyro Binding Index (TBI), and Achilles Tendon Reflex Test. Clinical experience has shown that a normal PBI (3.5-8 mcg/100 ml) will be obtained in patients made clinically euthyroid when the content of T_4 and T_3 is adequate. Dosage should be started in small amounts and increased gradually with increments at intervals of one to two weeks. Usual maintenance dose is 0.5 to 3.0 grains (32 to 190 mg) daily.

Instructions for Use: The following conversion table lists the approximate equivalents of other thyroid preparations to Proloid (thyroglobulin) when changing medication from desiccated thyroid, T_4 (sodium levothyroxine), T_3 (sodium liothyronine), or T_4/T_3 (liotrix).

Dose of Proloid (thyroglobulin)	Dose of desiccated thyroid	Dose of T_4 (sodium levothyroxine)	Dose of T_3 (sodium liothyronine)	Dose of liotrix (T_4/T_3)
1 grain	1 grain	0.1 mg	25 mcg	#1 (60 mcg/15 mcg)
2 grains	2 grains	0.2 mg	50 mcg	#2 (120 mcg/30 mcg)
3 grains	3 grains	0.3 mg	75 mcg	#3 (180 mcg/45 mcg)
4 grains	4 grains	0.4 mg	100 mcg	
5 grains	5 grains	0.5 mg	125 mcg	

In changing from Thyroid USP to Proloid (thyroglobulin), substitute the equivalent dose of Proloid (thyroglobulin). Each patient may still require fine adjustment of dosage because the equivalents are only estimates.

Overdosage Symptoms: Headache, instability, nervousness, sweating, tachycardia, with unusual bowel motility. Angina pectoris or congestive heart failure may be induced or aggravated. Shock may develop. Massive overdosage may result in symptoms resembling thyroid storm. Chronic excessive dosage will produce the signs and symptoms of hyperthyroidism.

(Treatment: In shock, supportive measures should be utilized. Treatment of unrecognized adrenal insufficiency should be considered.)

How Supplied: ¼ grain; ½ grain; scored 1 grain; 1½ grain; 3 grain; and scored 5 grain tablets, in bottles of 100 & 1000; and scored 2 grain tablets in bottles of 100.

Warner-Chilcott, Morris Plains, N. J. 07950

spite many defects, the Medicare program has made the indigent elderly patient more acceptable to the profession to the point where some of the criticism has died down.

On November 29, 1970, half a decade later, in Boston, Massachusetts, AMA president Dr. Walter C. Bornemeier called for a "marshalling" of AMA forces to develop "forward looking solutions." "Let's not be protectors of the past." He went on to say, "The poor must have access to medical care on the same basis as the most affluent citizens." Following his address, he told a press conference that he feels that private clinics will spring up in ghetto neighborhoods across the country in the next decade, though he conceded that there must be some kind of financial inducement to physicians to go into these areas. If, half a decade ago, the question had been asked of the top echelons in organized medicine "Am I my brother's keeper?", the answer would have been a resounding "No!" If that question were posed today, the answer would be a timid "Well, maybe." This change has been abetted to a considerable degree by political pressure from Washington. I urge you to read the comments of Elliot Richardson, Secretary of Health, Education, and Welfare. His basic message is that good medical care is a right to which everyone is entitled and not the privilege of a few. He emphasizes that physicians bear the major responsibility in the delivery of this right to everyone, including the poor. And now, having witnessed the giant steps forward in Kalamazoo medicine which, shortly, will make open heart surgery possible in this community, let us with equal enthusiasm address ourselves to the opposite end of the spectrum to do our bit to make good basic medical care available to the poor on the same basis as to the affluent.

May 15 the deadline for physicians' 1970-71 AMA-ERF contributions

By Mrs. Dean P. Carron
Ann Arbor

Dear Doctor,

Michigan was proud to receive national recognition at the annual meeting of the American Medical Association as the largest per capita contributor to the American Medical Association—Education and Research Foundation in the North Central Region. We thank you for framing our gift of an original picture, which you may see hanging on the wall in the auxiliary room of the Michigan State Medical Society Building.

Macomb County is the jewel in our bonnet. The doctor's wives in Macomb have been aiming for a national "first." For the past five years Macomb has been recognized in our region but some other county has inched by to win that coveted first place blue ribbon. Last year the per capita average for Macomb County was $56.25 per member. Mrs. Kirwin H. Steif was county AMA-ERF chairman.

It takes more than one 80-member county auxiliary to make Michigan a winner. Each of you who took the time to remember your favorite medical school with a check instead of a promise helped add to our total funds. This year we support two areas, funds for Medical Schools and the Loan Guarantee Fund. Under new arrangements, banks for the Loan Guarantee Fund now charge 1% over prime bank interest rate to medical students, interns and residents who use their loan service. Since prime interest rates have been reduced, these loans are popular.

One of our hard working AMA-ERFers is Mrs. James C. Cook, Chairman for Wayne County. This fall she earmarked $349.50 for Wayne State University, which she earned selling aprons and trivets. The Michigan medical school deans write appreciative thank you notes. Dean Andrew D. Hunt, Jr., MD, of Michigan State University wrote the following: “- - - - We are most pleased that you specified your contributions to us - - - - - - Funds from state and federal sources are specifically designated and provide essentially no options for alternative uses. - - - - - whatever we do in this college is in the interest of improving the health of the people of this state.”

HOSPITAL
PLANNING
INC.
Alco Universal Building
East Lansing, Michigan
48823
517 332-1333

PROFESSIONAL
PERSONNEL RECRUITMENT
FOR
HOSPITALS & CLINICS
Administrators, Physicians,
Dept. Heads

PHYSICIANS — ALL SPECIALTIES

At no financial obligation, let us present your resume to our Clients. As Planning & Personnel Consultants, we serve fine Hospitals, Clinics, Universities, and Health Planning Agencies in the Great Lakes Region. We advise physician candidates in depth about a variety of the best opportunities available to assist in making the best decisions.

We welcome resumes from physicians completing training as well as those who have been in practice for some time and desire to relocate, join a Clinic, or medical group. Good opportunities are available in all the specialties including general practice. Send your complete resume including desired objectives in confidence to Arthur A. Lepinot.

You need not designate a particular medical school unless it is a Canadian school. All of the United States schools share in these funds but when you name a particular school, all of your money goes to that school.

The county auxiliaries in Michigan give parties and hold boutique and auction sales, in short make great efforts to raise money for AMA-ERF. Among the things we sell is the book, *Medicine and Stamps.* ($4.00). The regular price of *Today's Health Guide* (paperback) has been increased to $6.50. Remember special occasions with the new In Memoriam, Thinking of You and In Honor contribution cards. Some doctors have these cards available in their office and from time to time I receive a contribution from a grateful patient. Use our memo pads and notes. They are attractive and support your fund.

Another “first” in Michigan is the beautiful set of our “Hello Hospital,” Med-Educator books written by one of our MD Wives. We recommend these books to any doctor who sees children—including his own. The four stories tell about Wendy Well and Billy Better, two animated cartoon children, who ask, “A Mill-yun Questions” about what a child experiences when he enters a hospital as a patient. The creators are John F. Welzenbach and Nancy (Mrs. J. Daniel of Midland) Cline. We earn a profit for AMA-ERF by selling these books. I have them available for $12.00 a set plus $1.00 for mailing. These books and other items will be available at the Auxiliary Spring Conference in Pontiac, April 28-29.

The auxiliary year for AMA-ERF runs from June 1st to May 31st. Auxiliary money is not used to operate the funds. Last year Michigan contributed $28,437.48. As of the end of February, we have sent in $12,000. Remember to make your check payable to AMA-ERF Auxiliary Fund. Send it to me by May 15th so we can be credited for 1970-71. Your continued support is most appreciated. Keep my name and address handy. I am AMA-ERF Chairman for Michigan.

The advertising in
MICHIGAN MEDICINE
keeps you informed
and helps pay the
publishing costs.

When the local
representative calls, Doctor,
tell him you saw
his company's ad
in your journal.

When Preventing Constipation is a Concern . . .

Consider

SURFAK®

dioctyl calcium sulfosuccinate

(stool softener)

Surfak prevents constipation:

- **naturally**
  - . . . without bowel distention
  - . . . without adding sodium to the system
  - . . . without requiring unusual intake of water
- **conveniently**—one 240 mg. capsule per day
- **economically**—costs less per effective daily dose*

Supplied: Bottles of 15, 100 (FSN 6505-926-8844) and 1000 (FSN 6505-890-1627) and Unit Dose 100's (10 x 10 strips).

*based on actual drug store survey of prescribed dosages

HOECHST
PHARMACEUTICAL CO.
Somerville, N.J. 08876 U.S.A.

C-167

The physician assistant picture

By Herbert A. Auer
Staff Assistant
MSMS Education Liaison Committee

Since 1965, the Michigan State Medical Society has been supporting in theory and promoting the concept of "physician assistants" and the medical literature has been filled with the 100 experimental programs across the nation.

The words "physician assistants" have been applied loosely to many new, trained health workers who have varying degrees of education and clinical training and who will be able to function in many different ways to assist physicians.

While there have been several national conferences on the subjects, articles in medical journals and the lay press, etc., etc., all the programs together have produced about 150 of these new people.

* * *

While no physician assistants are actually in training in Michigan as yet, national authorities have pointed to Michigan as the only state where the state medical society has officially through its House of Delegates supported the concept.

The Michigan medical professional society currently is advising Western Michigan University with its plans to train "Type A" physician assistants, as soon as necessary funding can be obtained and as soon as the Michigan Department of Education approves the new curricula and degree program for WMU.

The Western Michigan University development is being directed by George Mallinson, Ph.D., dean of the School of Graduate Study. WMU has a strong science department and already graduates paraprofessionals in the fields of blind therapy, occupational therapy, health education, etc.

There are two committees at work in Kalamazoo, one is a MSMS advisory committee of physicians and the other a faculty committee to build a special curriculum. The MD committee has developed a list of skills they hope the graduate will have so he can perform certain procedures. Some of this will be taught in classes at Western but a great deal will comprise the clinical experiences at the hospital and in the daily practice of selected doctors.

It is planned that students will begin the special physician-assistant curriculum after two years of liberal arts. Medical corpsmen who are selected for the program will be permitted to take comprehensive examinations if they have not had college work and many of those men are expected to work at the third-year level. The third year will be about 80 percent academic and 20 percent clinical, with the course work covering medical terminology, ethics of medicine, and concentrated courses in anatomy, physiology, pharmacology, psychology, etc., and some introductory courses in history taking, clinical medicine, etc. The fourth year would be about 60 percent academic and 40 percent clinical. The courses and work experiences would cover such subjects as physical diagnosis, medicine, surgery, obstetrics, radiology, pediatrics, etc.

The proposal at Western is to have the students attend college year-round and at the end of two and one-half years in the special curriculum, the student would have earned both a bachelor's degree and a master's degree—so he can later build upon these degrees if he wishes to go on.

Those students graduating with a bachelor's degree will have certain knowledge and experiences to perform certain functions for the physician, and those with a master's degree will be able to carry out additional responsibilities.

During the year of study for the master's degree, the student would specialize in pediatrics, family practice, industrial medicine, emergency room medical care, etc.

MSMS has taken no stand for or against the "Type B and C" physician assistants with lesser training to perform fewer duties.

The American Medical Association, the Association of American Medical Colleges and the U. S. Public Health Service have actively encouraged the physician assistant concept for some time. The idea was advanced in the *American Medical Association Journal* as early as June 10, 1961 in an article by Charles L. Hudson, MD, then a member of the AMA Council on Medical Services, who several years later gave the movement considerable support when he was president of the AMA.

Many credit the National Academy of Science for adding some structure to the entire matter when in 1970 the National Academy of Sciences Board of Medicine published the "Report of the Ad Hoc Panel on New Members of the Physician's Health Team."

That report advocates three categories of physician assistants, "distinguished primarily by the nature of the service each is best equipped to render by virtue of the depth and breadth of their medical knowledge and experience."

(Continued on Page 352)

30 Capsules
Allbee® with C
Each capsule Contains:
Thiamine mononitrate (Vit. B1) 15 mg
Riboflavin (Vit. B2) 10 mg
Pyridoxine hydrochloride (Vit. B6) 5 mg
Niacinamide 50 mg
Calcium pantothenate 10 mg
Ascorbic acid (Vit. C) 300 mg
A-H-ROBINS
AHR AHR

2 ways to give your patients a month's therapeutic supply of Vitamin C:

40 pounds of spinach or 30 Allbee® with C

Although raw spinach is an excellent source of vitamin C, your patient would have to eat 40 pounds a month (about 1⅓ lbs. a day) to get as much ascorbic acid as is contained in just one bottle of 30 Allbee with C capsules (taken one capsule daily). If the spinach is cooked, a person would have to ingest more than twice as much because cooking destroys much of the vitamin C, and still more is lost when the liquid is drained off. Allbee with C also contains therapeutic amounts of B-complex vitamins. This handy bottle of 30 capsules gives your patient a month's supply at a very reasonable cost. Also the economy size of 100. Available at pharmacies on your prescription or recommendation.

A. H. Robins Company, Richmond, Va. 23220

A-H-ROBINS

Main
DONNA
2 tab
3 tim

vacation in
a vial:
the spasm
reactors
in your practice
deserve

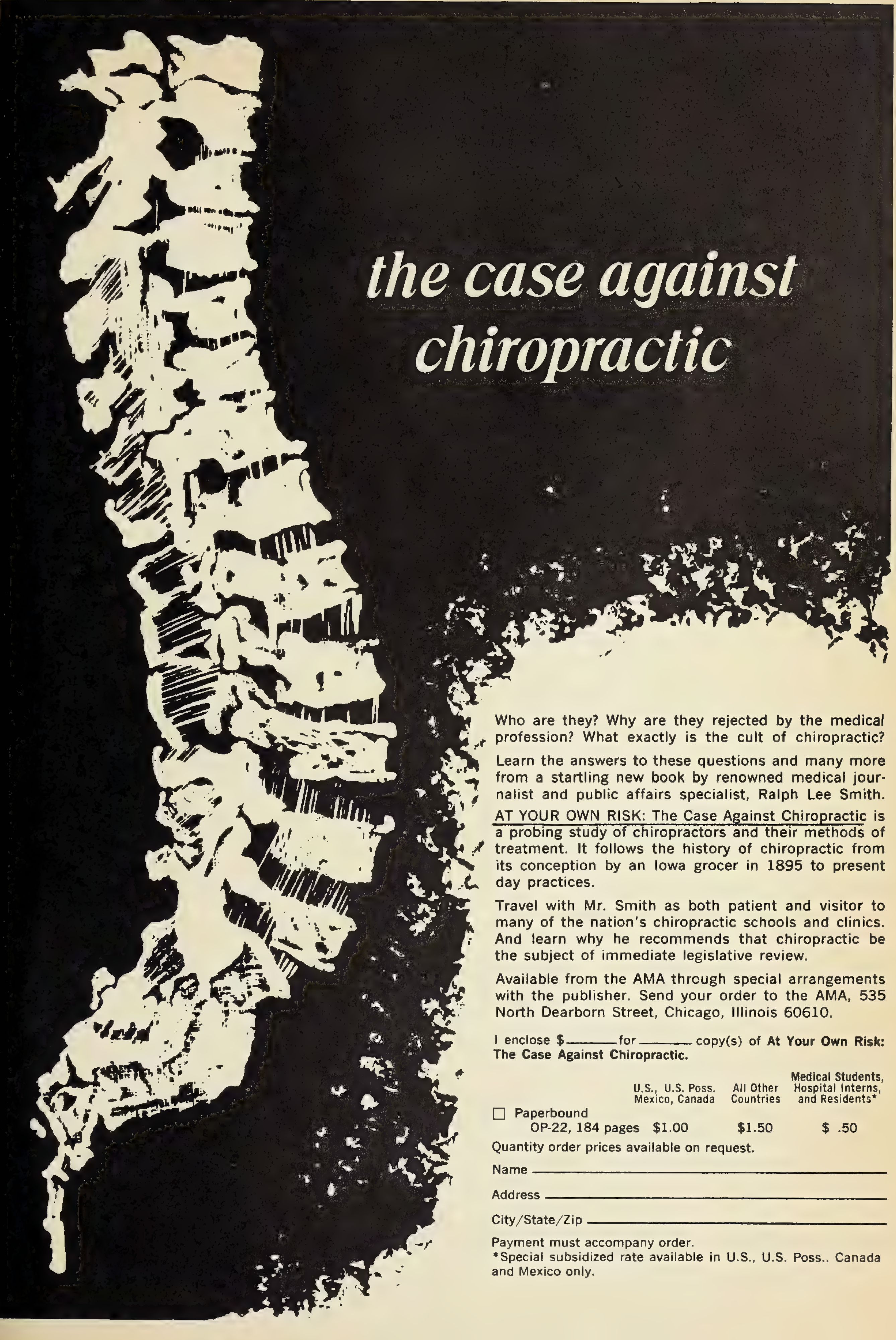
"the Donnatal Effect"

	each tablet, capsule or 5 cc. of elixir (23% alcohol)	each Donnatal No. 2	each Extentab®
hyoscyamine sulfate	0.1037 mg.	0.1037 mg.	0.3111 mg.
atropine sulfate	0.0194 mg.	0.0194 mg.	0.0582 mg.
hyoscine hydrobromide	0.0065 mg.	0.0065 mg.	0.0195 mg.
phenobarbital	(¼ gr.) 16.2 mg.	(½ gr.) 32.4 mg.	(¾ gr.) 48.6 mg.
(Warning: may be habit forming)			

Brief Summary. Blurring of vision, dry mouth, difficult urination, and flushing or dryness of the skin may occur on higher dosage levels, rarely on usual dosage. Administer with caution to patients with incipient glaucoma or urinary bladder neck obstruction. Contraindicated in acute glaucoma, advanced renal or hepatic disease or a hypersensitivity to any of the ingredients.

A. H. ROBINS COMPANY, RICHMOND, VIRGINIA 23220

A·H·ROBINS



Who are they? Why are they rejected by the medical profession? What exactly is the cult of chiropractic?

Learn the answers to these questions and many more from a startling new book by renowned medical journalist and public affairs specialist, Ralph Lee Smith.

AT YOUR OWN RISK: The Case Against Chiropractic is a probing study of chiropractors and their methods of treatment. It follows the history of chiropractic from its conception by an Iowa grocer in 1895 to present day practices.

Travel with Mr. Smith as both patient and visitor to many of the nation's chiropractic schools and clinics. And learn why he recommends that chiropractic be the subject of immediate legislative review.

Available from the AMA through special arrangements with the publisher. Send your order to the AMA, 535 North Dearborn Street, Chicago, Illinois 60610.

I enclose $______ for ______ copy(s) of **At Your Own Risk: The Case Against Chiropractic.**

	U.S., U.S. Poss. Mexico, Canada	All Other Countries	Medical Students, Hospital Interns, and Residents*
☐ Paperbound OP-22, 184 pages	$1.00	$1.50	$ .50

Quantity order prices available on request.

Name ________________________________

Address ______________________________

City/State/Zip _________________________

Payment must accompany order.

*Special subsidized rate available in U.S., U.S. Poss.. Canada and Mexico only.

When irritable colon feels like this

…in the presence of spasm or hypermotility, gas distension and discomfort, **KINESED**® provides more complete relief:

☐ **belladonna alkaloids—for the hyperactive bowel**
☐ **simethicone—for accompanying distension and pain due to gas**
☐ **phenobarbital—for associated anxiety and tension**

Composition: Each chewable, fruit-flavored, scored tablet contains: 16 mg. phenobarbital (warning: may be habit-forming); 0.1 mg. hyoscyamine sulfate; 0.02 mg. atropine sulfate; 0.007 mg. scopolamine hydrobromide; 40 mg. simethicone.
Contraindications: Hypersensitivity to barbiturates or belladonna alkaloids, glaucoma, advanced renal or hepatic disease.
Precautions: Administer with caution to patients with incipient glaucoma, bladder neck obstruction or urinary bladder atony. Prolonged use of barbiturates may be habit-forming.
Side effects: Blurred vision, dry mouth, dysuria, and other atropine-like side effects may occur at high doses, but are only rarely noted at recommended dosages.
Dosage: Adults: One or two tablets three or four times daily. Dosage can be adjusted depending on diagnosis and severity of symptoms. Children 2 to 12 years: One half or one tablet three or four times daily. Tablets may be chewed or swallowed with liquids.

STUART PHARMACEUTICALS | Pasadena, California 91109 | Division of ATLAS CHEMICAL INDUSTRIES, INC.

(from the Greek **kinetikos**,
to move,
and the Latin **sedatus**,
to calm)

KINESED®
antispasmodic/sedative/antiflatulent

Spring peeper (tree frog, *Hyla crucifer*): this small amphibian can expand its throat membrane with air until it is twice the size of its head.

The report further stated that: "Type A assistants are new to the American scene. Type B and C assistants have been present in one form or another for a number of years."

The existing programs and the one pending at Western Michigan University see students coming from the medical corps of the Armed Forces, from nursing and from other allied health professions, in addition to the thousands of qualified applicants each year who are not accepted for the limited number of openings in the 103 medical schools of the nation.

For the physician assistants to function in a successful manner, there must be both professional and consumer acceptability and there must be answers to the many complex legal questions.

The efforts to develop and use physician assistants are being studied in Michigan and the nation by the American Medical Association and MSMS; by the Association of American Medical Colleges and the Michigan medical schools; by the Michigan State Board of Registration in Medicine and the Michigan Department of Education; by the Michigan Comprehensive State Health Planning Advisory Council and the Michigan Association for Regional Medical Programs; by the professional association of nurses, pharmacists, dentists and others, and by interested members of the Michigan legislature.

The legal, licensing and insurance concerns lead to a "let's-go-slow" approach.

The American Medical Association House of Delegates in December, 1970 and the Board of Trustees of the American Hospital Association in November, 1970 each approved statements calling for a nation wide moratorium on licensure of any additional health occupations.

One of the newest developments in this constantly-changing picture of the physician assistant movement is the February, 1971 action by the AMA Board of Trustees which endorsed four recommendations of the National Commission for the Study of Nursing and Nursing Education. One of these suggestions—now from Medicine and Nursing—urges the creation of state and national joint committees "to study the roles of the physician, the nurse, and the physician's assistant and others."

Recently, a state agency administrator urged all interested bodies—the professions, the legislators, the governmental regulatory bodies, etc.—to go slow in approaching licensure. He was flatly opposed at this time to any licensing provisions.

The position paper on the physician assistant developed this year by the Health Manpower Task Force of the Comprehensive State Health Planning Advisory Council here in Michigan contains this statement: "In summary, persuasive arguments can be made for a minimum change in the Michigan medical practice act to recognize and sanction delegation during an experimental period which will offer a degree of simplicity and a minimum risk of locking in existing patterns . . . At the same time, there is a need to provide some formal framework within which innovative training programs and new patterns of utilization of new types of health manpower can be developed."

The National Center for Health Services Research and Development will present preliminary materials in mid-1971 from its five-year project to evaluate present programs and to develop model protocols to train physician assistants.

There seems to be general agreement by many of the leaders in these groups that an interim solution to the legal questions posed by the physician assistant would be a general exception clause in the Michigan medical practice act to provide general delegatory authority for physicians. Various phrases have been suggested, including the approach: to amend the act to exempt any act, task, or function performed under the direction of a licensed physician by a person qualified by formal or informal training and experiences to perform such act, task, or function.

Careful consideration to the many issues is being given by the Michigan State Medical Society, AMA, and the other interested groups. The questions will require time to analyze and work out—rather than rushing into licensing patterns and other limiting factors.

Critics of the early programs in the nation point to the relatively unstructured approaches in training various kinds of candidates *before* specific roles and functions were carefully determined. The 100 experimental and developmental programs already started will help provide the answers to many of these questions. These programs are being researched and studied carefully to assure high quality of medical care by these new physician-support personnel.

* * *

The first resolution on this subject was adopted by the MSMS delegates in September, 1965 and progress reports have been made each year to the delegates by the MSMS Education Liaison Committee. The 1970 House of Delegates adopted a resolution that MSMS "unanimously endorse" the pilot program of physician assistants at Western Michigan University and offer continuing support.

The AMA House of Delegates also has received reports annually on the physician assistant, and an AMA specialist in this field spent several days in Michigan in February, 1970 counseling MSMS and Western Michigan University.

The AMA House of Delegates in December,

1970 adopted the following working definition of the physician assistant: "A skilled person qualified by academic and practical on-the-job training to provide patient services under the supervision of a licensed physician who is responsible for the performance of that assistant."

The delegation of tasks by the physician to trained assistants is certainly not new. Such programs date back to 1700 when the medical profession in Russia trained and used "feldshers" as a new category of health personnel between the physician and auxiliary workers. Many nations, even today, use "assistant medical officers" to care for millions of persons. In the military, millions of Americans have been and are being served today by military medical corpsmen. An estimated 30,000 of these medical corpsmen are discharged annually—and most find no place in the health care system in our nation, where the demand for health care far exceeds the capacity of available physicians and health manpower.

Many advocate the physician assistant approach as one of the bright hopes. Generally it is agreed that neither the nursing or the medical profession has the numerical strength to furnish the present doctors all the assistants that are needed and can be used effectively.

In Michigan and most other states, appropriations from legislatures to the medical schools have not allowed the freshman classes to be increased fast enough to meet the growing demand for medical care. In Michigan, about 1,100 doctors of medicine are licensed each year by the Michigan State Board of Registration in Medicine—and about 400 of them are foreign-trained doctors. If all the graduates of the two Michigan medical schools last June remained in Michigan, the state would have gained only 325 doctors—far short of the 1,100 that are licensed. And there is an estimated need in Michigan now for 2,000 more doctors, according to the Michigan Health Council.

From "Report of the Ad Hoc Panel on New Members of the Physician's Health Team," published by National Academy of Sciences Board of Medicine, 1970

CATEGORIES OF PHYSICIANS' ASSISTANTS

The Type A Assistant

"The Type A assistant is capable of approaching the patient, collecting historical and physical data, organizing these data, and presenting them in such a way that the physician can visualize the medical problem and determine appropriate diagnostic or therapeutic steps. He is also capable of assisting the physician by performing diagnostic and therapeutic procedures and coordinating the roles of other, more technical, assistants. While he functions under the general supervision and responsibility of the physician, he might, under special circumstances and under defined rules, perform without the immediate surveillance of the physician. He is, thus, distinguished by his ability to integrate and interpret findings on the basis of general medical knowledge and to exercise a degree of independent judgment.

The Type B Assistant

"The Type B assistant, while not equipped with general knowledge and skills relative to the whole range of medical care, possesses exceptional skill in one clinical specialty or, more commonly, in certain procedures within such a specialty. In his area of specialty, he has a degree of skill beyond that normally possessed by a Type A assistant and perhaps beyond that normally possessed by physicians who are not engaged in the specialty. Because his knowledge and skill are limited to a particular specialty, he is less qualified for independent action. An example of this type of assistant might be one who is highly skilled in the physician's functions associated with a renal dialysis unit and who is capable of performing these functions as required.

The Type C Assistant

"The Type C assistant is capable of performing a variety of tasks over the whole range of medical care under the supervision of a physician, although he does not possess the level of medical knowledge necessary to integrate and interpret findings. He is similar to a Type A assistant in the number of areas in which he can perform, but he cannot exercise the degree of independent synthesis and judgment of which Type A is capable. This type of assistant would be to medicine what the practical nurse is to nursing.

"Presumably these new health careers would be open to members of either sex. Although practical nursing has in the past been a predominantly female occupation, some medical corpsmen, as they re-enter civilian life and seek careers in the health field, are taking the licensing exam and becoming practical nurses. There is no basis for preference for either sex relative to any of the assistant types described here.

"As far as can be foreseen into the future, these assistants should perform as members of a health team under the general supervision and authority of a physician or group of physicians. The provision that they should perform in a dependent relationship with physicians in fact expands the range of functions that are or may come to be within their individual spheres of competence. Of the various independent practitioners in the health field, only the physician is authorized to perform independently over the full range of medical care. The more narrowly defined spheres of activity of other practitioners are likely to influence strongly, if not firmly dictate, the limit of their functions and development—if for no other reason than that they bear so heavily on the nature of the problems that will be presented to them. On the other hand, assisting with the variety of problems that confront physicians over time provides opportunities for continuous learning and encourages the development of new skills that would justify 'rising ceilings' on the activities and careers of exceptionally able assistants.

"The functions performed by such assistants should be within the scope of medical competence of the physicians under whom they work. For example, it would be inappropriate for a surgeon's assistant to perform a preoperative cardiac evaluation unless the surgeon is competent to review his work critically.

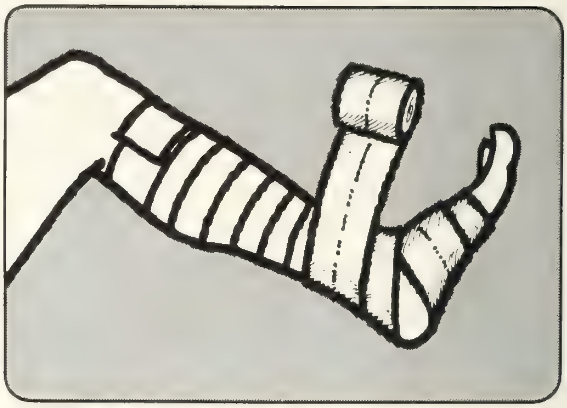
"Some assistants may wish to become independent, and they may do so by obtaining an M.D. degree. On the basis of performance and equivalency exams they may demonstrate that they have mastered many of the functions and concepts normally taught medical students in their clinical years. Type A assistants should be able to go through medical school in less than the usual four academic years."

New Members

Members of the Michigan State Medical Society join in welcoming the following new members into a progressive state medical organization. MSMS is dedicated to promoting the science and art of medicine, the protection of the public health, and the betterment of the medical profession. Each new member is encouraged to join with other MSMS members at both the local and the state levels in achieving these goals.

Shapoor Ansari, MD, Medical Arts Plaza, 750 Steward Rd., Monroe 48161
Robert M. Armbruster, MD, 626 Mott Foundation Bldg., Flint 48502
Hector Bensimon, MD, 645 Riverview, Benton Harbor 49022
Barry S. Bronson, MD, 445 Fox Hills Drive, North, Broomfield Hills 48013
Anne C. Carter, MD, Henry Ford Hospital, Detroit 48202
Paulino Chan, MD, 105 N. Jefferson St., Marshall 49068
K. Eswara Dutt, MD, Pontiac General Hospital, Pontiac 48053
Emilio A. Espinosa, MD, 9042 Lewis Ave., Temperance 48182
Cyrus Farrehi, MD, 302 Kensington Ave., Flint 48503
Stuart Fisher, MD, Detroit General Hospital, Detroit 48226
Robert Goldberger, MD, Pontiac General Hospital, Pontiac 48053
Rose Marie B. Gustilo, MD, Pontiac State Hospital, Pontiac 48053
Herald A. Habenicht, MD, Medical Center, Andrews University, Berrien Springs 49103
John S. Jacoby, MD, 2701 Fourth St., So., Minneapolis, Minn. 55408
Don P. Jones, MD, 1648 E. 50th St., Chicago, Ill. 60615
G. Reza Karimipour, MD, 35 S. Johnson St., Pontiac 48053
Mahmood Kadkhodaee-Elyaderany, MD, St. Joseph Mercy Hospital, Ann Arbor
Anis A. Kahn, MD, Kalamazoo State Hospital, Kalamazoo
Kenneth I. Kiluk, MD, 1013 N. Michigan Ave., Saginaw 48602
Ronald W. Kornak, MD, 509 Harris Bldg., Jackson, 49201
K. Robert Lang, MD, Medical Center, Andrews University, Berrien Springs 49103
Darlene Martenson, MD, 1600 N. Michigan Ave., Saginaw 48602
E. M. McGowan, MD, 910 Eastlawn Drive, Midland 48640
Frank L. Morton, MD, 27725 Greenfield Rd., Oakland County Dept. of Health, Southfield 48075

PRIMER®
PLUS
Flexoplast®



A practical, ambulatory treatment for leg ulceration

The Flexible Cast: The PRIMER medicated bandage, in conjunction with the FLEXOPLAST elastic adhesive bandage, comprise the cast.

This is a more comfortable and faster method of healing than Unna's Boot. Frequent changing of the dressing is eliminated. The newly forming granulation and epithelium are left undisturbed. It is the modern form of treatment.

EDWARD TAYLOR Ltd.
A Division of Glenwood Laboratories Inc.
Tenafly, New Jersey 07670

Gentlemen:

Please send me
☐ literature
☐ samples of PRIMER medicated bandage and FLEXOPLAST elastic adhesive bandage.

Name .... M.D.
Address ....
City ....
State .... Zip ....

BURDICK'S
NEW MW/225
MICROWAVE
DIATHERMY

INSTANT WARM-UP
MORE POWER
NEW VERSATILITY

The new MW/225 is an efficient, reliable source of therapeutic heat that is deeply penetrating, simple to control, and easily confined to specific treatment areas.

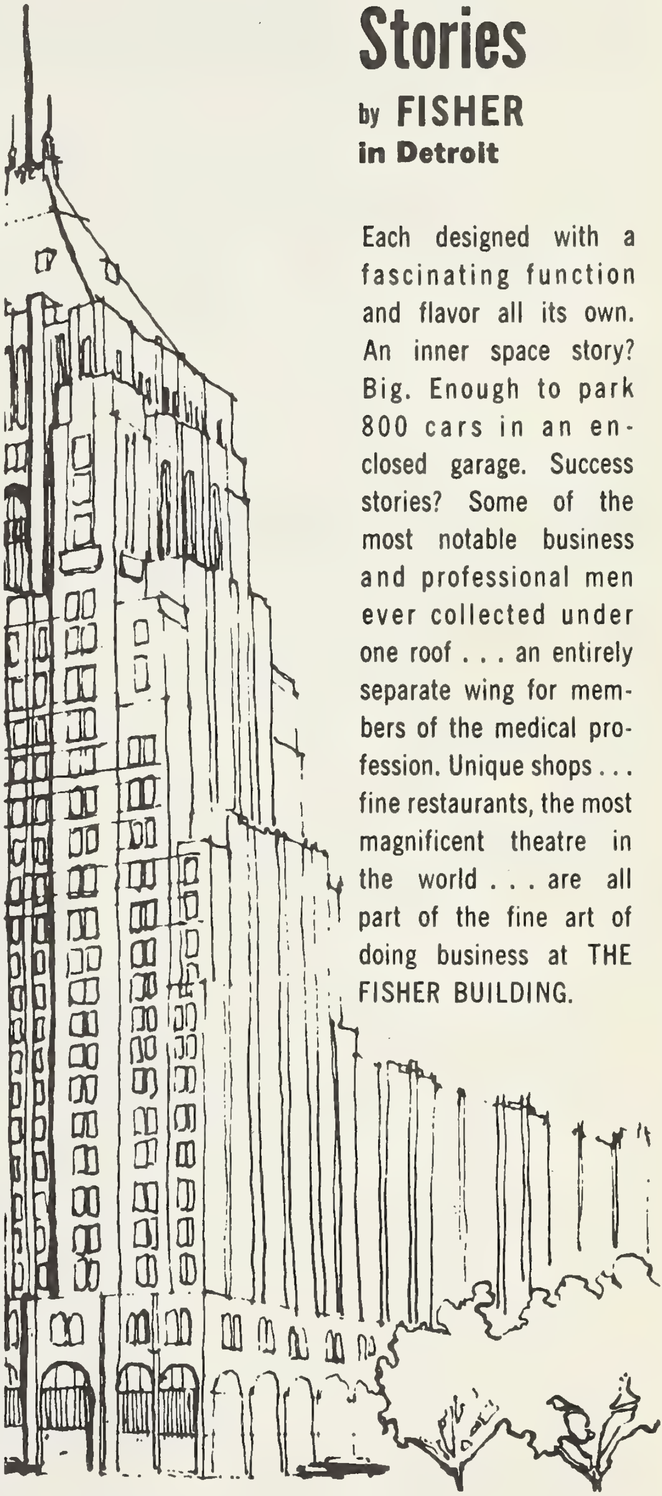
- **Instant warm-up/no waiting period**
- **125 watts of power output**
- **New directors offer effective wide-zone heating patterns at greater distances**
- **Flexible director cable; reliable 0/30-minute timer; solid state power supply designed and engineered for service-free operation; FCC Type Approval D-598**

The MW/225 is easy to operate, saves time and offers a wider range of applications. Fully-adjustable arm for easy positioning; modern styling, large casters for safe mobility, large storage space.

See your Burdick dealer for a demonstration, or write **The Burdick Corporation, Milton, Wisconsin 53563.**

BURDICK®

THE G. A. INGRAM COMPANY
4444 Woodward Avenue, Detroit, Michigan 48201
Telephone: TEmple 2-4444



28
Tall
Stories
by **FISHER**
in Detroit

Each designed with a fascinating function and flavor all its own. An inner space story? Big. Enough to park 800 cars in an enclosed garage. Success stories? Some of the most notable business and professional men ever collected under one roof . . . an entirely separate wing for members of the medical profession. Unique shops . . . fine restaurants, the most magnificent theatre in the world . . . are all part of the fine art of doing business at THE FISHER BUILDING.

Call or write the Rental Office
THE FISHER BUILDING
Across from the General Motors Bldg.
Detroit, Mich. 48202 (313)874-4444

when manhood ebbs.. or is delayed due to testicular hormonal insufficiency

What nature denies, Halotestin may replace. That's the purpose of this orally active androgen in conditions such as impotency, eunuchoidism, and eunuchism. The most widely used agent of its kind, Halotestin is replacement therapy with approximately five times the potency of oral methyltestosterone. And, at its recommended daily dosage of 2 to 10 mg., Halotestin is economical as well as convenient. Of course, you will want to employ androgens carefully in young boys to avoid premature epiphyseal closure . . . and in the elderly where possible sodium retention may, minimally, precipitate edema. Tablets of 2, 5, and 10 mg.

Halotestin® 5 mg. tablets

[fluoxymesterone Upjohn]

oral replacement with parenteral-like potency

Please see facing column for summary of contraindications, precautions, and adverse reactions.

Upjohn The Upjohn Company, Kalamazoo, Michigan 49001

Halotestin®
(fluoxymesterone, Upjohn)

Orally active androgen about 5 times as potent in anabolic and androgenic activity as methyltestosterone. Halotestin (fluoxymesterone) induces significant retention of calcium and potassium, but retention of sodium not marked. Doses below 20 mg. daily have little effect in producing creatinuria.
Indications *Male:* Replacement therapy in testicular hormone deficiency states. Prevents atrophy of the accessory male sex organs following castration for as long as therapy is continued. Impotence and male climacteric symptoms when due to androgen deficiency. Primary eunuchoidism and eunuchism. Delayed puberty when established as not a simple familial trait. Indicated for those symptoms of panhypopituitarism related to hypogonadism, however, appropriate adrenal cortical and thyroid hormone replacement therapy remain of primary importance. *Female:* Palliation of androgen-responsive, advanced, inoperable breast cancer in women between 1 and 5 years postmenopausal or women in whom castration has shown the tumor to be hormone dependent. Prevention of postpartum breast manifestations of pain and engorgement; there is no satisfactory evidence that this drug prevents or suppresses lactation per se. In osteoporosis androgens may be of adjunctive value to adequate considerations of diet, calcium balance, physiotherapy and general health promoting measures. *Males and Females:* In the treatment of protein depletion states which occur in geriatric patients, in debilitation states, in chronic corticoid therapy, resistant fractures; cryptorchidism; creating a positive nitrogen balance, tissue repair and other anabolic effects. Androgenic steroids may produce a response in aplastic anemias, myelofibrosis, myelosclerosis, agnogenic myeloid metaplasia and hypoplastic anemias due to malignancy or myelotoxic drugs. Androgens are not of value in other anemias.
Contraindications Pregnancy (may virilize female fetus), mammary carcinoma in the male, prostatic carcinoma, severe liver disease, severe cardiorenal disease and severe persistent hypercalcemia.
Precautions Employ with caution in young boys to avoid precocious sexual development and premature epiphyseal closure. Androgens tend to promote retention of sodium and water, therefore, watch for edema—particularly in the elderly. Incidence and severity of edema have been minimal and have been associated only with high doses used for palliation of breast cancer. Hypercalcemia may occur, particularly in patients with metastatic breast carcinoma; if this occurs the drug should be discontinued. Changes in liver function tests, such as increased BSP retention and SGOT levels, can occur during therapy. Jaundice has been rarely reported. If liver function tests are altered, discontinue medication or reduce dose. Priapism is indicative of excessive dosage and is indication for temporary withdrawal of drug. When treating protein depletion states or osteoporosis, an adequate diet should be provided and prolonged immobilization avoided whenever possible. When treating aplastic or hypoplastic anemias, androgen therapy should not replace other measure such as transfusion, correction of iron deficiency, antibacterial therapy, and the use of corticosteroids.
Adverse reactions Nausea, dyspepsia, menstrual irregularities, hepatic dysfunction, priapism, edema, precocious sexual development, and premature epiphyseal closure in young patients have been reported. *Male*—Prolonged administration or excessive dose may cause inhibition of testicular function with oligospermia and decreased ejaculation volume. *Female*—Large doses or prolonged administration may produce masculinization with signs such as hirsutism, deepening of the voice, enlargement of the clitoris, acne, and sometimes, increased libido.
Supplied *Tablets: 2 mg.*, scored—bottles of 100./*5 mg.*, scored—bottles of 50./*10 mg.*, scored—bottles of 50.
For additional product information, see your Upjohn representative or consult the package circular.

Upjohn The Upjohn Company, Kalamazoo, Michigan
JA68-7627-R MED 8-5-S (LQX)

Governmental Health Care Assistance Programs

(Fifth of a Series)

Civilian Health and Medical Program of the Uniformed Services (CHAMPUS)

This program provides comprehensive hospital and medical health benefits for dependents of active duty personnel, and retired members entitled to retired, retainer, or equivalent pay, their dependents and dependents of deceased active duty and retired personnel.

The Uniformed Services include: Army, Navy, Airforce, Marine Corps, Coast Guard, and the Commission Corps of the Public Health Service and of the Environmental Health Services Administration (formerly the Coast and Geodetic Survey).

Persons Eligible:

Dependents of members who are serving on active duty (or active duty for training) pursuant to a call or order that does not specify a period of 30 days or less.

Retired members entitled to retired, retainer, or equivalent pay.

Dependents of retired members.

Dependents of deceased active duty and deceased retired members.

Eligible dependents include—

Wife.

Unremarried widow.

Husband, if dependent on active duty or retired member for more than one-half of his support.

Unremarried widower, if he was dependent on the active duty or retired member at the time of her death for more than one-half of his support because of a mental or physical incapacity.

Unmarried legitimate child, including an adopted child and a legitimate stepchild, in one of the following categories:

(1) Under 21 years of age, regardless whether or not dependent on the active duty or retired member.

(2) Twenty-one or over, but incapable of self-support because of a mental or physical incapacity that existed before the age of 21, and is (or was at the time of the member's

death) dependent on the member for more than one-half of his support.

(3) Under 23, enrolled in a full-time course of study in an approved institution of higher learning, and is (or was at the time of the member's death) dependent on the member for more than one-half of his support.

Unmarried illegitimate child or illegitimate stepchild who is, or was at the time of death of the active duty or retired member, dependent on the member for more than one-half of his support; residing in the member's household or in a dwelling place provided or maintained by the member and—

(1) under 21 years of age.

(2) Over 21 years of age but incapable of self-support because of a mental or physical incapacity that existed prior to age 21.

(3) Under 23, enrolled in a full-time course of study in an approved institution of higher learning, and is (or was at the time of the member's death) dependent on the member for more than one-half of his support.

Dependent parents or parents-in-law are *not eligible* under the CHAMPUS for civilian medical care. They may, however, be eligible for care in facilities of the Uniformed Services. To be eligible for care in these facilities they must be (or must have been at the time of the member's death) dependent on the military member for more than one-half of their support and residing in a dwelling provided or maintained by the military member.

Benefits

Treatment of medical or surgical conditions; nervous, mental, and emotional disorders; chronic diseases and conditions, and contagious diseases.

Maternity care and in-hospital care of newborn infant.

Family planning services.

Diagnostic examinations.

Insulin.

Drugs and medicines obtainable only by prescription.

Anesthetics.

Oxygen.

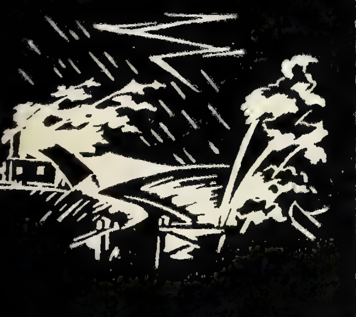
Blood transfusions, including the cost of blood and blood plasma, (except when donated or replaced) and blood plasma expanders.

(Continued on Page 361)

Specialized Service
IN
PROFESSIONAL LIABILITY INSURANCE
is a high mark of distinction
THE
MEDICAL PROTECTIVE COMPANY
FORT WAYNE, INDIANA
Professional Protection Exclusively since 1899

DETROIT OFFICE: R. K. Wind and J. K. Galloway, Representatives
27200 Lahser Road, Southfield 48075, Telephone: (Area Code 313) ELgin 3-4848 or 444-1439

GRAND RAPIDS OFFICE: G. J. Haworth, Representative
422 Federal Square Building, Grand Rapids 49502 Telephone: 616-454-4477



Hurricane Camille dumped up to 31 inches of rain on Virginia's Blue Ridge Mountains the night of August 19-20, 1969. She had already devastated the Gulf Coast from Louisiana to Florida, halted her northward journey over Kentucky and Tennessee, then headed eastward over West Virginia and Virginia.

Cooperative Farmer

Emotional stress can be just as destructive to the individual as turbulent, ravaging flood waters are to land and property. Solfoton will contribute to the maintenance of a mental climate for purposeful living.

Solfoton®

SEDATION WITHOUT DEPRESSION

EACH TABLET OR CAPSULE CONTAINS:
Phenobarbital . . . . 16 mg.
(Warning: may be habit-forming)
Bensulfoid (See PDR) . . . . . . 65 mg.

Precaution: same as 16 mg. phenobarbital

DOSAGE: One tablet or capsule every 6 hours will sustain mild sedation.

Available in three forms to satisfy prescribing circumstances:

TABLETS	100s	500s	5000s
CAPSULES	100s	500s	1000s
TABLETS S/C	100s	500s	4000s

Federal law prohibits dispensing without prescription

WILLIAM P. POYTHRESS & COMPANY, INC.
RICHMOND, VIRGINIA 23261
Manufacturers of Ethical Pharmaceuticals Since 1856

Thorazine®
brand of chlorpromazine
versatility
quality
experience
NOW
THERE'S PRICE
Smith Kline & French Laboratories SK&F

Immunizations when required as a part of medical treatment.

Home calls when medically necessary.

Dental care when it is necessary in the treatment of a medical or surgical condition other than dental.

Radiation therapy.

Physical therapy.

Orthopedic braces (except orthopedic shoes) and crutches.

Artificial limbs and artificial eyes.

Services of private-duty nurses when ordered by a physician.

Services of specialists in sciences allied to the practice of medicine when ordered by a physician.

Non-Government ambulance service when medically necessary.

Benefits not authorized

Routine physical examinations not for diagnostic purposes and routine immunizations (except for active duty dependents who are on order to perform travel outside the United States as a result of their sponsor's duty assignment).

Routine care of the newborn and well-baby care, except in-hospital care of the newborn.

Spectacles or examinations for spectacles.

Prosthetic devices (other than artificial limbs and artificial eyes), and orthopedic shoes.

Dental care (except as necessary in the treatment of a medical or surgical condition other than dental).

Domiciliary or custodial care.

Chiropractic services.

Civilian medical care for handicapped dependents of active duty personnel

A special program of civilian health services training and rehabilitation is available for the seriously physically handicapped and moderately or severely mentally retarded spouses and children of *members of the uniformed services who are serving on active duty.*

Services Authorized:

Diagnosis.

Inpatient, outpatient, and home care.

Surgery and medical care.

Dental care, including orthodontia needed to correct handicapping conditions.

Prosthetic devices and orthopedic appliances.

Special optical devices.

Purchase or rental of durable equipment such as a wheel chair, iron lung, hospital bed, and similar items.

Training, rehabilitation, and special education.

Institutional residential care in private nonprofit and in public institutions and facilities operated by Federal, state, county, or local governments.

Transportation to and from facilities in which the dependent is to receive or has received institutional care or to public or private nonprofit facilities providing services on a day care basis.

Identification Cards

Required as proof of eligibility for medical care from civilian sources. This is the only proof required (except for the Program for the Handicapped). Cards are not usually issued to children under 10; they can use parent's card.

Nonavailability Statements

Except in emergencies or during a period of absence from the area of the sponsor's household and in-patient's care is required, *dependents of active duty* personnel *who reside with their sponsors* require this Statement from a Uniformed Services medical facility prior to applying for inpatient care, or outpatient prenatal or postnatal maternity care in a civilian hospital.

Physicians desiring to participate in this program or requesting additional information may write to: Executive Director, Office of the Civilian Health and Medical Program of the Uniformed Services, Department of the Army, Denver, Colorado 80240.

Information may also be obtained by writing the medical facility of the nearest military installation or the Surgeons General of the Departments of the Army, Navy, and Airforce.

Announcing the calculated success

Euthroid® (liotrix) puts your patient here*:
4
3

*in the euthyroid zone
of the new Free
Thyroxine Index** wit
full replacement dosa

throid (liotrix) yields reliable, easily interpreted test values

ause Euthroid incorporates both active fractions of endogenous thyroid—T_4 and T_3—it
rcomes the need for special interpretation of thyroid function test values.

eover, whatever the therapy used, ordinary tests can be thrown off by such factors as
ormal thyroid-binding protein levels, oral contraceptive use and pregnancy. A new
hod of assessment—the Free Thyroxine Index (FTI)**—helps eliminate these errors. By
ting measurements of total and protein-bound T_4, the FTI indicates your patient's status
isely. And with Euthroid, the precision of your diagnosis is matched by the precision
our therapy.

osest in clinical effect to human endogenous thyroid

roid provides both T_4 and T_3 in the optimum *oral* ratio of 4:1 by weight and in proper
amounts, closely simulating endogenous thyroid in clinical effect. Dose response can
ssessed unequivocally through use of the FTI—and because we want you to put Euthroid
e test *with this most rigorous of tests,* we offer you an aid to easier determination:

e Euthroidex™ calculator—
the "new math" of thyroid laboratory tests

onger does FTI determination require you to perform lengthy mathematical exercises.
the Euthroidex calculator—another first from Warner-Chilcott—you compute it easily
ccurately... almost instantly. Send for yours now.

yroid therapy, Euthroid offers you the calculated success—and the calculator to go with it.

To request your
Euthroidex™ calculator
(with booklet explaining
its use and rationale
for the FTI), just write
"Euthroidex" on your
imprinted card, prescription blank or
stationery, and
mail to
Warner-Chilcott,
Morris Plains,
N.J. 07950.

the first synthetic to replace both active fractions of endogenous thyroid

Euthroid® (liotrix)

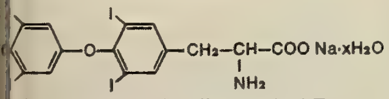
sodium levothyroxine (T_4)
sodium liothyronine (T_3)

---

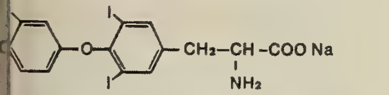
roid® (liotrix)

ion: Federal law prohibits dispensing
out prescription.

roid is synthetic microcrystalline sodium
thyroxine (T_4) USP and synthetic micro-
talline sodium liothyronine (T_3) USP com-
d in a constant 4:1 ratio.



odium levothyroxine (*l*-thyroxine) T_4



odium liothyronine (*l*-triiodothyronine) T_3

ons: Euthroid provides replacement ther-
for the thyroactive material normally
plied by the human thyroid. The normal
oid gland produces and stores thyro-
ulin, the active components of which are
metabolically active hormones: *l*-thy-
ne and liothyronine. Euthroid (liotrix) pro-
s a combination of these hormones in
fied, synthetic form, supplied in a con-
t 4:1 ratio in order to simulate as closely
possible the physiologic and metabolic
cts of normal endogenous thyroid secre-
s.

contrast with the individual synthetic,
abolically active hormones, Euthroid will
ally produce normal results for PBI, T_3,
other thyroid function tests—consistent
clinical progress—when persons with
ogenous thyroid deficiencies are made
yroid. Sodium liothyronine (T_3) acts more
dly and for a shorter period of time than
parations of biological origin. Custom-
, its use as a single agent produces in-
ropriately decreased PBI values. Sodium
thyroxine (T_4), on the other hand, is more
tly bound by plasma protein fractions and
somewhat slower acting than sodium
yronine (T_3); its use as a single agent
ls to produce inappropriately elevated
values. Euthroid, with its unvarying 4:1
of T_4/T_3, permits interpretation of ap-
priate laboratory tests consistent with the
l clinical status of the patient.

cations: Euthroid (liotrix) provides thyroid
acement therapy in all conditions of in-
quate production of thyroid hormones, namely:

1) Hypothyroidism, including cretinism and myxedema.
2) Simple (nontoxic) goiter.
3) Subacute or chronic thyroiditis including Hashimoto's disease.
4) Prevention of goiter in hyperthyroid patients undergoing treatment with thiouracil derivatives.
5) Usage in patients who may manifest intolerance to thyroid products of animal origin.

Contraindications: Acute myocardial infarction, adrenal insufficiency, hypersensitivity to any component of this drug.

Warnings: Liotrix should not be used in the presence of cardiovascular disease unless thyroid replacement therapy is clearly indicated. If the latter exists, low doses should be instituted (Euthroid-1/2 or Euthroid-1) and increased by the same amount in increments at 2-week intervals. This demands careful clinical judgment.

Morphologic hypogonadism and nephroses should be ruled out and adrenal deficiency due to hypopituitarism corrected before liotrix therapy is started.

If hypothyroidism and adrenal insufficiency exist concomitantly, cortisone or similar steroids should be given at dose levels sufficient to correct the adrenal insufficiency before attempting replacement therapy with thyroid hormones.

Likewise, the possibility of alterations in the prothrombin time must be considered and closely monitored in patients on anticoagulant therapy.

Myxedematous patients are very sensitive to thyroid hormones, and dosage should be started at a very low level and increased gradually.

Precautions: Hypothyroid patients are especially sensitive to thyroid preparations, and those with severe hypothyroidism may be unusually so.

Initiation of thyroid replacement therapy in patients with diabetes must be carefully monitored because of potential fluctuation in daily insulin or oral hypoglycemic requirements.

As with all thyroid preparations, this drug will alter the results of thyroid function tests.

Adverse Reactions: Overdosage or too rapid increase in dosage of thyroid preparations can produce signs and symptoms of hyperthyroidism, such as menstrual irregularities, nervousness, cardiac arrhythmias, and angina pectoris.

Dosage and Administration: Initial dosage should be low and gradually increased at 2-week intervals until the desired clinical response is obtained.

Laboratory criteria of euthyroidism include a PBI of 3.5 to 8 mcg; T_3, T_4, and BEI tests are useful.

For most patients, a single daily dose of Euthroid-1, -2, or -3 will maintain euthyroidism. Transfer of a patient from a maintenance dose of another thyroid preparation to Euthroid can usually be effected smoothly. See table for initiating therapy or converting from other thyroid preparations.

Euthroid (liotrix)		**Approximate Equivalents** **Natural**	**Synthetic**	
Tablet	T_4*/T_3** mcg	Thyroid USP	T_4*	T_3**
Euthroid-½ pale orange	(30/7.5)	½ grain	.05 mg	12.5 mcg
Euthroid-1 light brown	(60/15)	1 grain	.1 mg	25.0 mcg
Euthroid-2 violet	(120/30)	2 grains	.2 mg	50.0 mcg
Euthroid-3 gray	(180/45)	3 grains	.3 mg	75.0 mcg

*T_4=sodium levothyroxine (*l*-thyroxine)
**T_3=sodium liothyronine (*l*-triiodothyronine)

Dosage for cretinism or severe hypothyroidism in children is the same as for adults with myxedema. Eventual maintenance dosage in the growing child may be higher than in the adult.

Overdosage: *Symptoms*—Headache, instability, nervousness, sweating, tachycardia, and unusual bowel motility. Angina pectoris or congestive heart failure may be induced or aggravated. Shock may develop. Massive overdosage may result in symptoms resembling thyroid storm; chronic excessive dosage will produce the signs and symptoms of hyperthyroidism.

Treatment—Shock—Supportive measures should be utilized. Treatment of unrecognized adrenal insufficiency should be considered.

Supplied: Square W/C monogrammed tablets of four potencies, each identified by a different color (see table); bottles of 100 and 1000.

E-GP-11-4C

WARNER-CHILCOTT Morris Plains, N.J. 07950

, F., and Horn, D. B.: Assessment of thyroid function by
ombined use of the serum protein-bound iodine and resin uptake of
triiodothyronine, J. Clin. Endocrinol. *25*:39 (Jan.) 1965.

Your opinion please

Is the trend towards centralization of health services in the hospitals good? If so, why do you think so? If not, how can the trend be altered?

Karl S. Klicka, MD
Wayne

Rather than seeing a trend towards centralization of health services in hospitals I see a trend towards hospitals existing as central institutions in health service complexes that will be called the "Community Health Center" or "Health Services Center." This complex can be likened to a shopping center for health services with respect to convenience and ease of access for patients, physicians, personnel, and visitors.

In establishing a community health center, objectives will become more clearly defined. They will embody many of the essentials necessary for the development of a truly comprehensive and coordinated health services system. These objectives can be listed as follows:

1. Establishment of the park and shop concept. An entry point will be established for patients providing reception, information, and direction to persons seeking health services and health related services. To the extent possible these services will be available from a central parking lot similar to that found in a shopping center. The hospital will exist as the largest health service structure.
2. Shared services. Common supporting services will exist such as the power plant, housekeeping, maintenance, laundry, food preparation, purchasing, pharmacy, data processing, telephone switchboard services, etc. The use of common services will reduce individual agency costs and avoid costly unnecessary duplication.
3. Closely related physician services. Physicians will be grouped in one or more office structures where they will follow their personal choice of practice whether this be solo, partnership, or group practice. In all likelihood the services of all these physicians will be offered either on a pre-payment basis or on a fee-for-service basis. The important single factor is that physicians' services will be grouped, making for easy referral between physicians. Patients are not concerned with the business arrangements that doctors may have with one another. They want convenience and accessibility of their personal physician's services and the services of physicians to whom they may have been referred.
4. The entire complex may operate under a management board of directors whose membership will be composed of laymen, administrators, and professionals, some of whom will be physicians. The individual major services such as hospitals should have their own individual board of directors but each of these boards should be related to the main management board of the complex. Hopefully, the management board will be organized as a voluntary community effort so that it will reflect consumer demands.

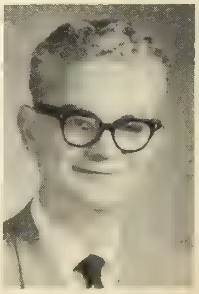
I see this concept as a reality that will emerge very rapidly in the next five to 10 years. It should erase the fears that some physicians have of domination by hospitals. These fears have arisen because hospitals are large institutions and because they have taken a position of leadership in attempting not only to make health services more accessible to the public but to keep those health services at a high level of quality as well.

My personal feeling is that there need be no fear of hospital control over physicians. Quality of

(Continued on Page 367)

Doctor Rasmussen

Doctor Stander


Doctor Kelleher

The girth control pill

Tepanil® Ten-tab®

(continuous release form)

(diethylpropion hydrochloride, N.F.)

When girth gets out of control, TEPANIL can provide sound support for the weight control program you recommend. TEPANIL reduces the appetite—patients enjoy food but eat less. Weight loss is significant—gradual—yet there is a relatively low incidence of CNS stimulation.

Contraindications: Concurrently with MAO inhibitors, in patients hypersensitive to this drug; in emotionally unstable patients susceptible to drug abuse.

Warning: Although generally safer than the amphetamines, use with great caution in patients with severe hypertension or severe cardiovascular disease. Do not use during first trimester of pregnancy unless potential benefits outweigh potential risks.

Adverse Reactions: Rarely severe enough to require discontinuation of therapy, unpleasant symptoms with diethylpropion hydrochloride have been reported to occur in relatively low incidence. As is characteristic of sympathomimetic agents, it may occasionally cause *CNS effects* such as insomnia, nervousness, dizziness, anxiety, and jitteriness. In contrast, CNS depression has been reported. In a few epileptics an increase in convulsive episodes has been reported. Sympathomimetic *cardiovascular effects* reported include ones such as tachycardia, precordial pain, arrhythmia, palpitation, and increased blood pressure. One published report described T-wave changes in the ECG of a healthy young male after ingestion of diethylpropion hydrochloride; this was an isolated experience, which has not been reported by others. *Allergic phenomena* reported include such conditions as rash, urticaria, ecchymosis, and erythema. *Gastrointestinal effects* such as diarrhea, constipation, nausea, vomiting, and abdominal discomfort have been reported. Specific reports on the hematopoietic system include two each of bone marrow depression, agranulocytosis, and leukopenia. A variety of miscellaneous adverse reactions have been reported by physicians. These include complaints such as dry mouth, headache, dyspnea, menstrual upset, hair loss, muscle pain, decreased libido, dysuria, and polyuria.

Convenience of two dosage forms: TEPANIL Ten-tab tablets: One 75 mg. tablet daily, swallowed whole, in midmorning (10 a.m.); TEPANIL: One 25 mg. tablet three times daily, one hour before meals. If desired, an additional tablet may be given in midevening to overcome night hunger. Use in children under 12 years of age is not recommended.

T-107/4/71/U.S. PATENT NO. 3,001,910

THE NATIONAL DRUG COMPANY
DIVISION OF RICHARDSON-MERRELL INC.
PHILADELPHIA, PENNSYLVANIA 19144

Painful night leg cramps...

unwelcome bedfellow for any patient—including those with arthritis, diabetes or PVD

One thing patients can sleep without, particularly patients with chronic disease conditions such as arthritis, diabetes or PVD, is painful night leg cramps. Although seldom the presenting complaint, night leg cramps can tie your patients up in painful knots. Now, just one tablet of QUINAMM at bedtime can usually bring an end to shattered sleep and needless suffering. Your patients will sleep restfully—gratefully—with QUINAMM, specific therapy to prevent painful night leg cramps.

Prescribing Information — Composition: Each white, beveled, compressed tablet contains: Quinine sulfate, 260 mg., Aminophylline, 195 mg. **Indications:** For the prevention and treatment of nocturnal and recumbency leg muscle cramps, including those associated with arthritis, diabetes, varicose veins, thrombophlebitis, arteriosclerosis and static foot deformities. **Contraindications:** QUINAMM is contraindicated in pregnancy because of its quinine content. **Precautions/Adverse Reactions:** Aminophylline may produce intestinal cramps in some instances, and quinine may produce symptoms of cinchonism, such as tinnitus, dizziness, and gastrointestinal disturbance. Discontinue use if ringing in the ears, deafness, skin rash, or visual disturbances occur. **Dosage:** One tablet upon retiring. Where necessary, dosage may be increased to one tablet following the evening meal and one tablet upon retiring. **Supplied:** Bottles of 100 and 500 tablets.

THE NATIONAL DRUG COMPANY
DIVISION OF RICHARDSON-MERRELL INC.
PHILADELPHIA, PENNSYLVANIA 19144

Quinamm™ Specific therapy for night leg cramps

(quinine sulfate 260 mg., aminophylline 195 mg.)

care is the critical issue and as long as physicians are willing and capable of maintaining quality, through peer review mechanisms, for example, there need be little apprehension of either hospitals or government striving to assume control that rightfully belongs to the medical profession.

(Doctor Klicka is executive director of the Peoples Community Hospital Authority of Wayne.)

Richard A. Rasmussen, MD
Grand Rapids

The trend toward centralizing of more health services in the hospital is here. It has been gradual and is expected to continue. Though we may disagree, it appears to be sensible and to have real merit.

Medical practice and the delivery of health services continues to undergo a gradual change. The day of the medical doctor who cared for most all disease conditions has passed. The general doctor now quite properly will continue to care for the routine problems and refer the unresolving or complicated problems to the specialists who are generally more hospital-oriented than the generalist.

All doctors are increasingly enlisting the help of all types of para-medical personnel, even more of whom are hospital-oriented. The diagnosis and treatment programs of disease conditions are best developed in the hospital where special types of equipment are located as well as the personnel.

The physician must direct the overall program for each patient's medical problem. This should be required of him. His knowledge of disease processes and requirements must be fully utilized. These important decisions should not be relegated to poorly trained or incompetent individuals.

The public has set the hospital up as the evaluation point for disability, old age benefits, etc. In this general environment, the changing state of practice and method of delivering health services, the physician will be able to work most efficiently in the hospital where he can have the patient available, where he can most fully use the equipment, lab services, and ancillary personnel needed to accomplish present day diagnosis and treatment programming.

The doctor's office does have a place in the initial examination, the evaluation and management of routine problems. It should continue to be so oriented as a part of the general plan. It certainly does not suffice for night-time or week-end requirements anymore than does the house call which in many populated areas has become impossible because of the activities of society in general. Even on a true errand of mercy, the personal safety of the physician is in jeopardy!!

Emergency services are best centered at the hospital. The trend has thus been toward the involvement of hospitals in the delivery of services. It would be wisest for us and best for everyone that the physician assist in every way possible with his know-how to develop the most efficient methods of accomplishing the job, and at the least expense possible. He should have an active hand in the development of programs and must assume his appropriate responsibility in the total delivery of Health Services.

A. C. Stander, MD
Saginaw

This question is not as clear as it might be if "health services" were more completely defined. Certainly any health services that would benefit both patients and physician by being a part of, or in close proximity to the hospital might be desirable. Any clinics providing care and requiring adjunctive services of the hospital, would certainly fit into this trend. Naturally any services which would have mutual relationships and benefits to the hospital are appropriate and may be desirable.

This trend, in groups of hospitals in close proximity, could lead to more efficient and economical operation in many ways. Reduplication of equipment and effort and expensive competition could be eliminated by a combination or separation of medical services, i.e., all obstetrics in one hospital, pediatrics in another, cardiac and vascular diagnostic and surgical services in another. Need every hospital have a cardiac care unit? Combination of emergency room services, radiological services, combined laboratory services, group hospital or community usage of multiphasic analytic laboratory equipment, combined usage of computer, could be advantageous to all. Combined laundry, purchasing of supplies, standardized record materials, food services are other methods of promoting efficiency and economy by a group of hospitals.

I do not feel that this trend would be good, if it encompassed centralization of what is now the private office practice of medicine, including present private physician group practices into a corporate type of group practice. I feel that the type of group practice involving large numbers of salaried physicians, so highly lauded today, has yet to be proven the excellent system its proponents have proclaimed. Kaiser Permanente, for example, has been cited as being better, more efficient, less costly, and delivering quality care. But there is gathering evidence that these claims need further analysis.

It is stated that 10 to 20% of care of Kaiser Permanente patients is being provided outside the systems. Physicians writing the A.M.A. have stated specifically that, while not in the plan, but in the

(Continued on Page 371)

The peo

ple pill.

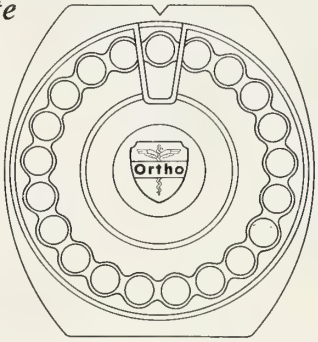
Ortho-Novum 1/50□21 is for people.

People who want no more hormonal activity than is needed for effective contraception—50 mcg of mestranol and 1 mg of norethindrone.

People who want a pill to stay with—like the 1,719 patients on Ortho-Novum 1/50□21 in a controlled study. Of these, only 2.3% dropped out for drug-related reasons.[1]

People who appreciate the unique qualities of the Dialpak—the Tablet Dispenser preferred by an overwhelming majority of women.*[2]

People who like the simplicity of the 21-day regimen…3 weeks on, 1 week off.



Yes, Ortho-Novum 1/50□21 is for people. That's why people are for Ortho-Novum 1/50□21.

---

1. Data on file, Ortho Research Foundation, Raritan, N. J., 2. Oral Contraceptive Packaging Test, Suburban Research Associates, Ridgewood, N. J., June 1970.

Ortho-Novum 1/50□21
TRADEMARK

Each tablet contains 1 mg norethindrone
and 0.05 mg mestranol

*TRADEMARK

See next page for prescribing information.

Ortho-Novum 1/50□21
TRADEMARK

Each tablet contains 1 mg norethindrone and 0.05 mg mestranol

PRESCRIBING INFORMATION

DESCRIPTION: Each ORTHO-NOVUM 1/50□21 Tablet contains 1 mg of the potent progestational substance, norethindrone (17 *alpha*-ethinyl-17-hydroxy-4-estren-3-one) together with 0.05 mg of the estrogenic compound, mestranol (ethinyl estradiol 3-methyl ether).

SPECIAL NOTE: Oral contraceptives have been marketed in the United States since 1960. Reported pregnancy rates vary from product to product. The effectiveness of the sequential products appears to be somewhat lower than that of the combination products. Both types provide almost completely effective contraception.

An increased risk of thromboembolic disease associated with the use of hormonal contraceptives has now been shown in the studies conducted in both Great Britain and the United States. Other risks, such as those of elevated blood pressure, liver disease and reduced tolerance to carbohydrates, have not been quantitated with precision.

Long term administration of both natural and synthetic estrogens in subprimate animal species in multiples of the human dose increases the frequency for some animal carcinomas. These data cannot be transposed directly to man. The possible carcinogenicity due to the estrogens can neither be affirmed nor refuted at this time. Close clinical surveillance of all women taking oral contraceptives must be continued.

INDICATION: Contraception.

CONTRAINDICATIONS: 1. Thrombophlebitis, thromboembolic disorders, cerebral apoplexy, or a past history of these conditions.
2. Markedly impaired liver function.
3. Known or suspected carcinoma of the breast.
4. Known or suspected estrogen dependent neoplasia.
5. Undiagnosed abnormal genital bleeding.

WARNINGS: 1. The physician should be alert to the earliest manifestations of thrombotic disorders (thrombophlebitis, cerebrovascular disorders, pulmonary embolism, and retinal thrombosis). Should any of these occur or be suspected, the drug should be discontinued immediately.

Retrospective studies of morbidity and mortality in Great Britain and studies of morbidity in the United States have shown a statistically significant association between thrombophlebitis, pulmonary embolism, and cerebral thrombosis and embolism and the use of oral contraceptives. There have been three principal studies in Great Britain[1-3] leading to this conclusion, and one[4] in this country. The estimate of the relative risk of thromboembolism in the study by Vessey and Doll[3] was about sevenfold, while Sartwell and associates in the United States found a relative risk of 4.4, meaning that the users are several times as likely to undergo thromboembolic disease without evident cause as non-users. The American study also indicated that the risk did not persist after discontinuation of administration, and that it was not enhanced by long continued administration. The American study was not designed to evaluate a difference between products. However, the study suggested that there might be an increased risk of thromboembolic disease in users of sequential products. This risk cannot be quantitated, and further studies to confirm this finding are desirable.

2. Discontinue medication pending examination if there is sudden partial or complete loss of vision, or if there is a sudden onset of proptosis, diplopia or migraine. If examination reveals papilledema or retinal vascular lesions, medication should be withdrawn.

3. Since the safety of ORTHO-NOVUM 1/50□21 in pregnancy has not been demonstrated, it is recommended that for any patient who has missed two consecutive periods, pregnancy should be ruled out before continuing the contraceptive regimen. If the patient has not adhered to the prescribed schedule, the possibility of pregnancy should be considered at the time of the first missed period.

4. A small fraction of the hormonal agents in oral contraceptives has been identified in the milk of mothers receiving these drugs. The long range effect to the nursing infant cannot be determined at this time.

PRECAUTIONS: 1. The pretreatment and periodic physical examinations should include special reference to breasts and pelvic organs, including Papanicolaou smear since estrogens have been known to produce tumors, some of them malignant, in five species of subprimate animals.

2. Endocrine and possibly liver function tests may be affected by treatment with ORTHO-NOVUM 1/50□21. Therefore, if such tests are abnormal in a patient taking ORTHO-NOVUM 1/50□21, it is recommended that they be repeated after the drug has been withdrawn for two months.

3. Under the influence of estrogen-progestogen preparations, pre-existing uterine fibromyomata may increase in size.

4. Because these agents may cause some degree of fluid retention, conditions which might be influenced by this factor, such as epilepsy, migraine, asthma, cardiac or renal dysfunction, require careful observation.

5. In breakthrough bleeding, and in all cases of irregular bleeding per vaginam, nonfunctional causes should be borne in mind. In undiagnosed bleeding per vaginam, adequate diagnostic measures are indicated.

6. Patients with a history of psychic depression should be carefully observed and the drug discontinued if the depression recurs to a serious degree.

7. Any possible influence of prolonged ORTHO-NOVUM 1/50□21 therapy on pituitary, ovarian, adrenal, hepatic or uterine function awaits further study.

8. A decrease in glucose tolerance has been observed in a significant percentage of patients on oral contraceptives. The mechanism of this decrease is obscure. For this reason, diabetic patients should be carefully observed while receiving ORTHO-NOVUM 1/50□21 therapy.

9. The age of the patient constitutes no absolute limiting factor, although treatment with ORTHO-NOVUM 1/50□21 may mask the onset of the climacteric.

10. The pathologist should be advised of ORTHO-NOVUM 1/50□21 therapy when relevant specimens are submitted.

11. Susceptible women may experience an increase in blood pressure following administration of contraceptive steroids.

ADVERSE REACTIONS OBSERVED IN PATIENTS RECEIVING ORAL CONTRACEPTIVES: A statistically significant association has been demonstrated between use of oral contraceptives and the following serious adverse reactions:

Thrombophlebitis   Pulmonary embolism   Cerebral thrombosis

Although available evidence is suggestive of an association, such a relationship has been neither confirmed nor refuted for the following serious adverse reactions:

Neuro-ocular lesions, e.g., retinal thrombosis and optic neuritis

The following adverse reactions are known to occur in patients receiving oral contraceptives:

Nausea
Vomiting
Gastrointestinal symptoms
  (such as abdominal
  cramps and bloating)
Breakthrough bleeding
Spotting
Change in menstrual flow
Amenorrhea during and after treatment
Breast changes: tenderness, enlargement and secretion
Changes in cervical erosion and cervical secretions
Suppression of lactation when given immediately post-partum
Rise in blood pressure in susceptible individuals

Edema
Chloasma or Melasma
Cholestatic jaundice
Migraine
Rash (allergic)
Mental depression
Change in weight
  (increase or decrease)

Although the following adverse reactions have been reported in users of oral contraceptives, an association has been neither confirmed nor refuted:

Anovulation post treatment; Premenstrual-like syndrome; Changes in libido; Changes in appetite; Cystitis-like syndrome; Headache; Nervousness; Dizziness; Fatigue; Backache; Hirsutism; Loss of scalp hair; Erythema multiforme; Erythema nodosum; Hemorrhagic eruption; Itching.

The following laboratory results may be altered by the use of oral contraceptives:

Hepatic function: increased sulfobromophthalein retention and other tests;

Coagulation tests: increase in prothrombin, Factors VII, VIII, IX, and X;

Thyroid function: increase in PBI, and butanol extractable protein bound iodine and decrease in T^3 uptake values;

Metyrapone test;   Pregnanediol determination.

DOSAGE AND ADMINISTRATION: The dosage of ORTHO-NOVUM 1/50□21 for the initial cycle of therapy is one tablet administered daily from the 5th through the 25th day of the menstrual cycle, counting the first day of menstrual flow as "Day 1". The use of ORTHO-NOVUM 1/50□21 for contraception can be initiated immediately postpartum. (If ORTHO-NOVUM 1/50□21 is first taken later than the fifth day of the first menstrual cycle of medication or postpartum, contraceptive reliance should not be placed on ORTHO-NOVUM 1/50□21 until after the first seven consecutive days of administration. The possibility of ovulation and conception prior to initiation of medication should be considered.) For subsequent cycles, no tablets are taken for 7 days, then a new course is started of one tablet a day for 21 days. The dosage regimen then continues with 7 days of no medication followed by 21 days of medication, instituting a three weeks on, one week off dosage regimen.

HOW SUPPLIED: ORTHO-NOVUM 1/50□21 Tablets (as yellow unscored tablets with "Ortho" and "1" debossed on each side) are available in DIALPAK* Tablet Dispenser containing 21 tablets and DIALPAK 3-cycle Tablet Dispenser containing 63 tablets arranged for 3 cycles of administration.

REFERENCES: **1.** Royal College of General Practitioners: Oral Contraception and Thromboembolic Disease. J. Coll. Gen. Pract., *13*:267-279, 1967. **2.** Inman, W. H. W. and Vessey, M. P. Investigation of Deaths from Pulmonary Coronary and Cerebral Thrombosis and Embolism in Women in Child-Bearing Age, Brit. Med. J., *2*:193-199, 1968. **3.** Vessey, M. P. and Doll, R. Investigation of Relation between Use of Oral Contraceptives and Thromboembolic Disease. A Further Report, Brit. Med. J., *2*:651-657, 1969. **4.** Sartwell, P. E., Masi, A. T., Arthes, F. G., Greene, G. R., and Smith, H. E., Thromboembolism and Oral Contraceptives: An Epidemiological Case-Control Study, Am. J. Epidem. *90*:365-380, (Nov.) 1969.

*TRADEMARK

©ORTHO PHARMACEUTICAL CORPORATION 1971

Ortho

ORTHO PHARMACEUTICAL CORPORATION · RARITAN, NEW JERSEY 08869

area, they take care of many k
nente patients. Thus the real cost
type of group practice needs furth
and analysis.

Another disadvantage of the t
tralization is that it may affec
availability and convenience th
factors in medical care delivery.
are also important in merchar
other services is indicated by
satellite area (shopping cen
is a phenomenon of our tin
and health services so uni
reverse this modern trend?

The trend toward centr
advocated by physicians,
politicians, social-planners,
educators, salaried and in
These, and others, who s
wrong with the medical ca
ful about voicing their
pointed experts, on ana
doing so well in their
are informed and expert
quently they consult wi
the services. It is also
are that they are right.

Those undesirable
health services can be
ful research and analy
political activity. Unl
care take this initiati
et al., may succeed. Th
credibility by changin
where changes and im
conomy, ar

WAYNE STATE UNIVERSITY

CLINIC DAY

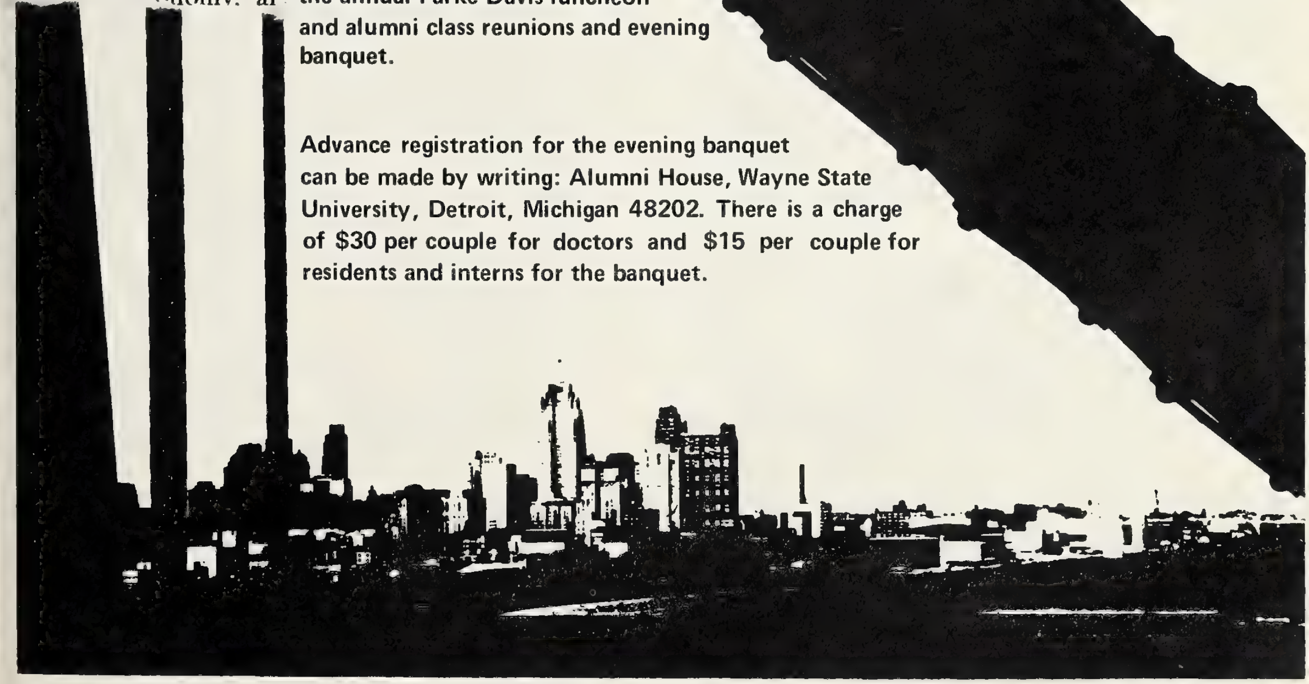
WEDNESDAY, MAY 12, 1971
SHERATON-CADILLAC HOTEL, DETROIT

ns and public figures in the area of pollution and environmental

Brickley	Lt. Governor, State of Michigan
	Mt. Sinai School of Medicine, New York
	regional co-ordinator, Environmental Protection Agency
	author of *Since Silent Spring* and *Disaster By Default*
ingham, M.D.	acting chairman, Occupational and Environmental Health, Wayne State University
	board chairman, Detroit Edison Company

and featuring
pictorial preview
of Wayne State University's $24 million Basic
Medical Science Building,
the annual Parke-Davis luncheon
and alumni class reunions and evening
banquet.

Advance registration for the evening banquet can be made by writing: Alumni House, Wayne State University, Detroit, Michigan 48202. There is a charge of $30 per couple for doctors and $15 per couple for residents and interns for the banquet.



Ortho-Novum 1

TRADEMARK

Each tablet contains 1 mg norethindrone and 0.

PRESCRIBING INFORMATION

DESCRIPTION: Each ORTHO-NOVUM 1/50□21 Tablet contains 1 mg of the potent progestational substance, norethindrone (17 *alpha*-ethinyl-17-hydroxy-4-estren-3-one) together with 0.05 mg of the estrogenic compound, mestranol (ethinyl estradiol 3-methyl ether).

SPECIAL NOTE: Oral contraceptives have been marketed in the United States since 1960. Reported pregnancy rates vary from product to product. The effectiveness of the sequential products appears to be somewhat lower than that of the combination products. Both types provide almost completely effective contraception.

An increased risk of thromboembolic disease associated with the use of hormonal contraceptives has now been shown in the studies conducted in both Great Britain and the United States. Other risks, such as those of elevated blood pressure, liver disease and reduced tolerance to carbohydrates, have not been quantitated with precision.

Long term administration of both natural and synthetic estrogens in subprimate animal species in multiples of the human dose increases the frequency for some animal carcinomas. These data cannot be transposed directly to man. The possible carcinogenicity due to the estrogens can neither be affirmed nor refuted at this time. Close clinical surveillance of all women taking oral contraceptives must be continued.

INDICATION: Contraception.

CONTRAINDICATIONS: 1. Thrombophlebitis, thromboembolic disorders, cerebral apoplexy, or a past history of these conditions.

2. Markedly impaired liver function.

3. Known or suspected carcinoma of the breast.

4. Known or suspected estrogen dependent neoplasia.

5. Undiagnosed abnormal genital bleeding.

WARNINGS: 1. The physician should be alert to the earliest manifestations of thrombotic disorders (thrombophlebitis, cerebrovascular disorders, pulmonary embolism, and retinal thrombosis). Should any of these occur or be suspected, the drug should be discontinued immediately.

Retrospective studies of morbidity and mortality in Great Britain and studies of morbidity in the United States have shown a statistically significant association between thrombophlebitis, pulmonary embolism, and cerebral thrombosis and embolism and the use of oral contraceptives. There have been three principal studies in Great Britain[1-3] leading to this conclusion, and one[4] in this country. The estimate of the relative risk of thromboembolism in the study by Vessey and Doll[3] was about sevenfold, while Sartwell and associates in the United States found a relative risk of 4.4, meaning that the users are several times as likely to undergo thromboembolic disease without evident cause as non-users. The American study also indicated that the risk did not persist after discontinuation of administration, and that it was not enhanced by long continued administration. The American study was not designed to evaluate a difference between products. However, the study suggested that there might be an increased risk of thromboembolic disease in users of sequential products. This risk cannot be quantitated, and further studies to confirm this finding are desirable.

2. Discontinue medication pending examination if there is sudden partial or complete loss of vision, or if there is a sudden onset of proptosis, diplopia or migraine. If examination reveals papilledema or retinal vascular lesions, medication should be withdrawn.

3. Since the safety of ORTHO-NOVUM 1/50□21 in pregnancy has not been demonstrated, it is recommended that for any patient who has missed two consecutive periods, pregnancy should be ruled out before continuing the contraceptive regimen. If the patient has not adhered to the prescribed schedule, the possibility of pregnancy should be considered at the time of the first missed period.

4. A small fraction of the hormonal agents in oral contraceptives has been identified in the milk of mothers receiving these drugs. The long range effect to the nursing infant cannot be determined at this time.

PRECAUTIONS: 1. The pretreatment and periodic physical examinations should include special reference to breasts and pelvic organs, including Papanicolaou smear since estrogens have been known to produce tumors, some of them malignant, in five species of subprimate animals.

2. Endocrine and possibly liver function tests may be affected by treatment with ORTHO-NOVUM 1/50□21. Therefore, if such tests are abnormal in a patient taking ORTHO-NOVUM 1/50□21, it is recommended that they be repeated after the drug has been withdrawn for two months.

3. Under the influence of estrogen-progestogen preparations, pre-existing uterine fibromyomata may increase in size.

4. Because these agents may cause some degree of fluid retention, conditions which might be influenced by this factor, such as epilepsy, migraine, asthma, cardiac or renal dysfunction, require careful observation.

5. In breakthrough bleeding, and in all cases of irregular bleeding per vaginam, nonfunctional causes should be borne in mind. In undiagnosed bleeding per vaginam, adequate diagnostic measures are indicated.

6. Patients with a history of psychic depression should be carefully observed and the drug discontinued if the depression recurs to a serious degree.

7. Any possible influence
on pituitary, ovarian, adrer
study.

8. A decrease in glucose tole
centage of patients on oral con
is obscure. For this reason, dia
while receiving ORTHO-NOVUM

9. The age of the patient constitut
ment with ORTHO-NOVUM 1/50

10. The pathologist should be adv
when relevant specimens are subr

11. Susceptible women may experie
ing administration of contraceptive

ADVERSE REACTIONS OBSERVED I
CEPTIVES: A statistically significant
tween use of oral contraceptives and
Thrombophlebitis Pulmonary
Although available evidence is sugge
ship has been neither confirmed nor re
reactions:

Neuro-ocular lesions, e.g., retinal th
The following adverse reactions are
oral contraceptives:

Nausea
Vomiting
Gastrointestinal symptoms
(such as abdominal
cramps and bloating)
Breakthrough bleeding
Spotting
Change in menstrual flow
Amenorrhea during and after treatment
Breast changes: tenderness, enlargement a
Changes in cervical erosion and cervical sec
Suppression of lactation when given immed
Rise in blood pressure in susceptible individ

Although the following adverse reactions have
contraceptives, an association has been neit
Anovulation post treatment; Premenstrua
libido; Changes in appetite; Cystitis-like syn
Dizziness; Fatigue; Backache; Hirsutism;
forme; Erythema nodosum; Hemorrhagic e
The following laboratory results may be a
ceptives:

Hepatic function: increased sulfobromop
tests;

Coagulation tests: increase in prothrombin, factors VII, VIII, IX, and X;

Thyroid function: increase in PBI, and butanol extractable protein bound iodine and decrease in T^3 uptake values;

Metyrapone test; Pregnanediol determination.

Schedule
ual Premium*
al Premium*
residences,
ally insured

DOSAGE AND ADMINISTRATION: The dosage of ORTHO-NOVUM 1/50□21 for the initial cycle of therapy is one tablet administered daily from the 5th through the 25th day of the menstrual cycle, counting the first day of menstrual flow as "Day 1". The use of ORTHO-NOVUM 1/50□21 for contraception can be initiated immediately postpartum. (If ORTHO-NOVUM 1/50□21 is first taken later than the fifth day of the first menstrual cycle of medication or postpartum, contraceptive reliance should not be placed on ORTHO-NOVUM 1/50□21 until after the first seven consecutive days of administration. The possibility of ovulation and conception prior to initiation of medication should be considered.) For subsequent cycles, no tablets are taken for 7 days, then a new course is started of one tablet a day for 21 days. The dosage regimen then continues with 7 days of no medication followed by 21 days of medication, instituting a three weeks on, one week off dosage regimen.

HOW SUPPLIED: ORTHO-NOVUM 1/50□21 Tablets (as yellow unscored tablets with "Ortho" and "1" debossed on each side) are available in DIALPAK* Tablet Dispenser containing 21 tablets and DIALPAK 3-cycle Tablet Dispenser containing 63 tablets arranged for 3 cycles of administration.

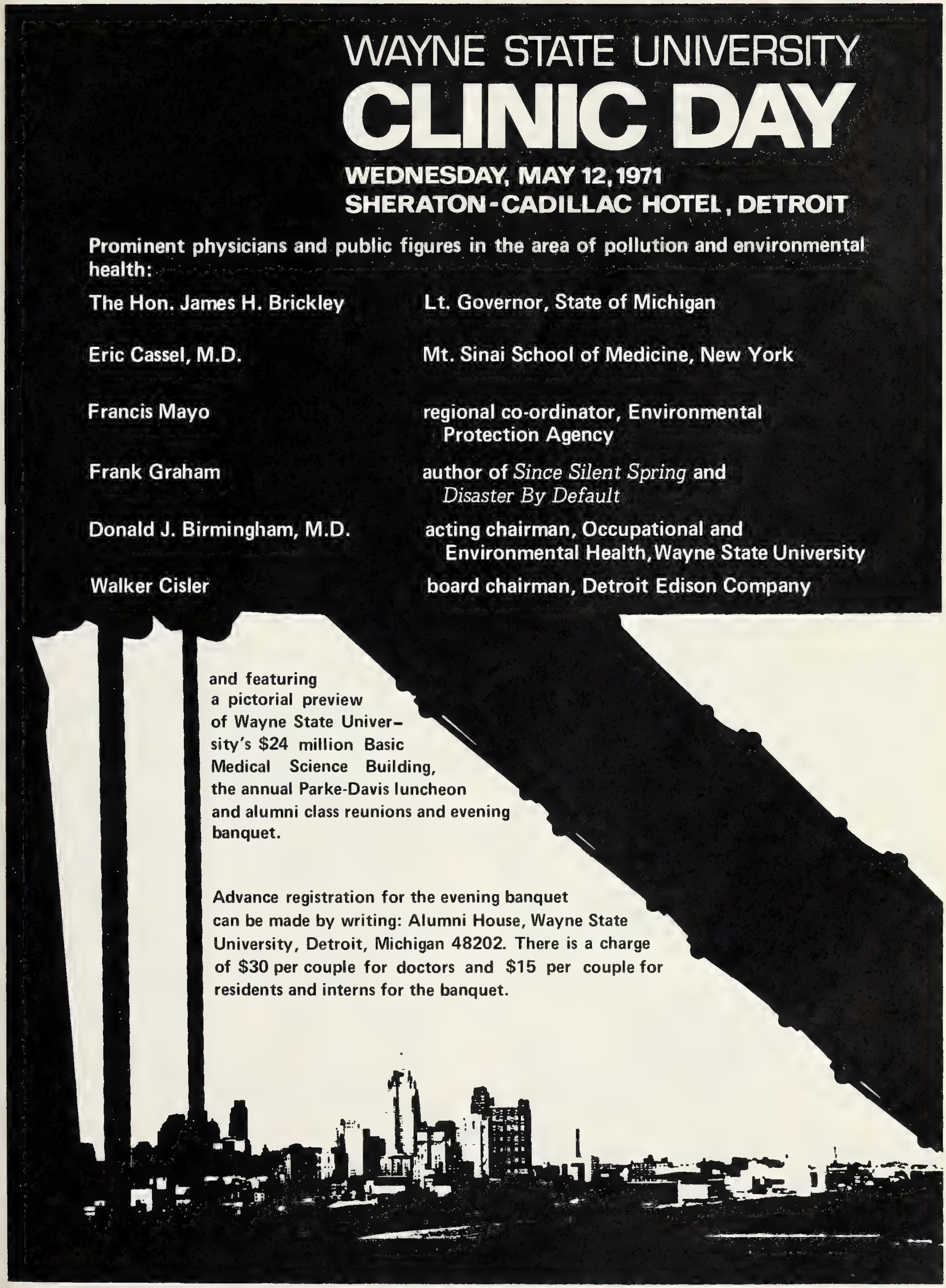
REFERENCES: 1. Royal College of General Practitioners: Oral Contraception and Thromboembolic Disease. J. Coll. Gen. Pract., *13*:267-279, 1967. 2. Inman, W. H. W. and Vessey, M. P. Investigation of Deaths from Pulmonary Coronary and Cerebral Thrombosis and Embolism in Women in Child-Bearing Age, Brit. Med. J., *2*:193-199, 1968. 3. Vessey, M. P. and Doll, R. Investigation of Relation between Use of Oral Contraceptives and Thromboembolic Disease. A Further Report, Brit. Med. J., *2*:651-657, 1969. 4. Sartwell, P. E., Masi, A. T., Arthes, F. G., Greene, G. R., and Smith, H. E., Thromboembolism and Oral Contraceptives: An Epidemiological Case-Control Study, Am. J. Epidem. *90*:365-380, (Nov.) 1969.

*TRADEMARK

©ORTHO PHARMACEUTICAL CORPORATION 1971

Ortho

ORTHO PHARMACEUTICAL CORPORATION · RARITAN, NEW JERSEY 08869



WAYNE STATE UNIVERSITY
CLINIC DAY

WEDNESDAY, MAY 12, 1971
SHERATON-CADILLAC HOTEL, DETROIT

Prominent physicians and public figures in the area of pollution and environmental health:

The Hon. James H. Brickley	Lt. Governor, State of Michigan
Eric Cassel, M.D.	Mt. Sinai School of Medicine, New York
Francis Mayo	regional co-ordinator, Environmental Protection Agency
Frank Graham	author of *Since Silent Spring* and *Disaster By Default*
Donald J. Birmingham, M.D.	acting chairman, Occupational and Environmental Health, Wayne State University
Walker Cisler	board chairman, Detroit Edison Company

and featuring a pictorial preview of Wayne State University's $24 million Basic Medical Science Building, the annual Parke-Davis luncheon and alumni class reunions and evening banquet.

Advance registration for the evening banquet can be made by writing: Alumni House, Wayne State University, Detroit, Michigan 48202. There is a charge of $30 per couple for doctors and $15 per couple for residents and interns for the banquet.

Ancillary

Wurtsmith doctors hoping to start clinic for Indians

If things have gone as planned, six young physicians stationed at Wurtsmith Air Force Base near Oscoda are now operating a medical clinic for a settlement of Chippewa Indians north of the base.

The physicians hoped, as this issue was being prepared, to see patients by the first of April. They have been led in their attempts to establish the clinic by Thomas E. Hayhurst, MD, stationed at the base hospital.

If their goal is reached it will be the climax to nearly a year of arrangements by the base physicians. They have obtained the permission of the Air Force, local physicians and MSMS to establish the clinic. In addition, the physicians have sought and gained medical-legal protection from the Air Force, and licenses for those without sanction to practice in Michigan.

According to Doctor Hayhurst, most of the approximately 60 Indians near the base are living at subsistence level and have not received adequate medical care. He and his colleagues envision the bulk of their services will be on an outpatient basis with emphasis on preventive medicine.

Doctor Hayhurst will terminate his duty at the base in August. Another of the six physicians will complete his service at Wurtsmith in July.

"We hope we can have the clinic in operation at least four months before we must leave, so that other physicians coming after us can keep it going," says Doctor Hayhurst.

Heart Association's Scientific Sessions April 29 - May 1, Detroit

The Michigan Heart Association's annual Scientific Sessions April 29-May 1 at Cobo Hall, Detroit, will open with a morning session Thursday, April 29, on "Stroke Warning Signs and Risk Factors," followed by an afternoon session on "Organic and Emotional Problems of Stroke."

The Thursday morning program is designed to prepare physicians for a possible rush of patients as a result of a public information program on the warning signs of stroke being planned by the Heart Association.

An ECG seminar is also planned Thursday morning for nurses and technicians.

The program on Friday and Saturday will include discussions of "The Failing Myocardium" and "Treating the Failing Myocardium," with five speakers from around the United States.

U-M sponsoring two cont'g education courses in July

The Department of Community Health Services of the School of Public Health at the University of Michigan is sponsoring two continuing education courses during July at Weber's Inn, Ann Arbor.

The first course, in consultation skills, is scheduled July 11-16, and the second, in "The Dynamics of the Community: Your Working Environment," is planned for July 25-30. Further information may be obtained from Vlado A. Getting, MD, Department of Community Health Services, School of Public Health, The University of Michigan 48104.

INDEX TO ADVERTISERS

AMA	349
Arch Laboratories	376
Arnar-Stone Laboratories, Inc.	292
Breon Laboratories	341
Bristol Laboratories	332, 333
Brown Pharmaceuticals	377
Burroughs-Wellcome & Co.	325
Campbell Soup Co.	323
Classified Advertising	376
David Whitney Bldg.	329
Fisher Bldg. The	355
Geigy Pharmaceuticals	294
Hoechst Pharmaceutical Corp.	345
Homemakers, Inc.	Cover III
Hospital Planning, Inc.	344
Ingram, G. A. Company	355
Lilly, Eli and Co.	300
Medical Protective Co.	358
Medicenter of America	378
Merck, Sharp & Dohme	330, 331
Mercywood Hospital	377
Michigan Heart Association	296
National Drug Co.	327, 328, 365, 366
Ortho Pharmaceutical Corp.	368, 369, 370
Poythress, Wm. P. & Co.	359
J. M. Richards Laboratory	375
Riker Laboratories, Inc.	299
Robins, A. H. Co.	347, 348
Roche Laboratories	291, 336 Cover II, Cover IV
Searle, G. D. & Co.	334, 335
Smith, Kline & French	360
Squibb	326
Stratton, Ben. P. Agency	372
Stuart Pharmaceuticals	350, 351
Taylor, Edward Ltd.	354
Upjohn	324, 356, 357
Walker Corp. & Co.	338, 339
Warner-Chilcott	342, 343, 362, 363
Wayne State University	373

In memoriam

Leon M. Bogart, MD
Flint

A Flint surgeon for over 50 years, Leon M. Bogart, MD, died Jan. 29 at the age of 84.

Doctor Bogart was born in Russia and was graduated from the Chicago College of Medicine and Surgery. He was a founder of the International Institute for the study of Goiter, of the Flint Academy of Surgery and the Hurley Intern Alumni Association.

He was a fellow of the International College of Surgeons and the American Society of Abdominal Surgeons and was a past president of the Genesee County Medical Society. Doctor Bogart also served many years on the board of Michigan Hospital Service.

He was a member of the board of managers of Hurley Hospital and chief of surgery of both Hurley and St. Joseph Hospitals in Flint. He had served as chief of the outpatient unit of the City Health Department and was chief of its goiter clinic.

Brain Disorders with Emphasis on Epilepsy and EEG

One-Day Course at
Holiday Inn, Battle Creek, Mich.
May 1, 1971—9:00 AM to 5 PM

This intensive One-Day Course is intended for the general practitioner, as well as the specialists in encephalography. Some of the topics include:

- **Tumors**
- **Vascular Conditions**
- **Epilepsies**
  - **Hypsarrhythmia**
  - **Lennox-Gastaut Syndrome**
  - **Cortico-Reticular Discharge (Petit Mal)**
  - **Temporal Lobe Discharge**
- **Positive Spikes**
- **Cerebral Death**

Faculty:
Dr. John R. Hughes, Professor,
Department of Neurology
Director, EEG and Neurophysiology
Dr. Sandra Olson, Asst. Professor,
Department of Neurophysiology
Both of Northwestern University,
The Medical School

For full particulars write or call for the program:
J. M. Richards Laboratory
15224 Kercheval
Grosse Pointe Park, Michigan 48230
Telephone: (313) 499-1150

Ten Years of Service in Education

Paul H. DeKruif, PhD
Holland

Paul H. DeKruif, PhD, honorary MSMS member from Holland and well-known science writer, died Feb. 28 at the age of 80.

Doctor DeKruif, a native of Zeeland, became famous as an author with his book, "Microbe Hunters," published in 1926.

Edwin C. Miller, MD
Bay City

Edwin Charles Miller, MD, Bay City surgeon since 1929, died Jan. 26 at the age of 68.

Doctor Miller was chief of staff at General and Mercy Hospitals in Bay City and was chief of surgery at both hospitals several times. He was chief of surgical service for the Mediterranean Theater headquarters in 1943-45 and was past president of the Bay-Arenac-Iosco County Society.

He was a fellow of the Academy of International Medicine and an associate of James Clements' Library, Ann Arbor, and was also president of the Hamilton Clothing Co., Traverse City.

William D. Ryan, MD
Detroit

Retired Detroit physician William Don Ryan, MD, died Jan. 26 at the age of 81. He was at his winter home in St. Petersburg, Fla.

Doctor Ryan, a past surgeon general of the Veterans of Foreign Wars, was a graduate of St. Louis University School of Medicine. He had been affiliated with Providence Hospital, Detroit.

Doctor Ryan had also been chairman of the National Rehabilitation Committee in 1943-44, and was chief medical examiner for Wayne County for 35 years.

Edgar John Vaughan, MD
Linden

Edgar John Vaughan, MD, a Genesee County assistant medical examiner, died Feb. 11 at the age of 47.

Doctor Vaughan had practiced medicine in Linden for 22 years and was a graduate of the University of Michigan Medical School. A general practitioner, he was affiliated with McLaren General, Hurley and St. Joseph hospitals in Flint.

David Weingarden, MD
Detroit

David Weingarden, MD, retired Detroit internist, died Jan. 29 at the age of 76.

Doctor Weingarden, a graduate of Wayne State University's School of Medicine, held a life membership with the AMA, MSMS and the Wayne County Medical Society. He had been affiliated with Grace Hospital, Detroit.

Classified Advertising

$5.00 per insertion of 50 words or less, with an additional 10 cents per word in excess of 50.

PSYCHIATRIC RESIDENCIES: Excellent, approved psychiatric training; both demanding and clinically rich in a stimulating, well-organized program. The setting is a culturally satisfying community; the serene, scenic, Grand Traverse Bay area. Present salaries: 3 year plan ($11,359 - $11,922 - $12,925); 5 year plan ($12,945 - $14,950 - $17,393 - $23,198 - $24,409). Contact Dr. Paul E. Kauffman, Director of Psychiatric Training, Room 165, Traverse City State Hospital, Traverse City, Michigan 49684. An equal opportunity employer.

GENERAL PRACTITIONERS: Are you interested in bringing up your family in a small community with excellent school systems, churches and city pride? We are centrally located just off US-131 between Grand Rapids and Kalamazoo and in definite need for at least one new doctor. Write: Otsego Chamber of Commerce, Otsego, Michigan 49078.

OFFICE SPACE: Grand Haven, Michigan, located on Lake Michigan. A clean progressive city with steady diversified employment, new hospital—the best school system. A fine place to start your practice and raise your family. Office is located in the most convenient and desirable location, to be divided to suit the tenant. Phone (616) 842-6530 or (616) 842-4939 evening. OR WRITE: Beacon Professional Building, Beacon Blvd., Grand Haven, Mi 49417.

Well trained, family physician of retirement age doing largely internal medicine and grossing over $100,000 per year, desires competent younger man as replacement associate. Excellent hospital and office facilities, in rural area. Inquire: Box 3, Michigan State Medical Society, 120 West Saginaw St., East Lansing, Michigan 48823.

University trained board eligible anesthesiologist. Married, 42, Michigan license. Vast experience in all types of anesthetics especially interested in pediatric anesthesia. Also respiratory therapy. Would consider to join well organized group or associate. Fee for Service Minimum 50M. Reply Box #1, 120 W. Saginaw Street, East Lansing, Michigan 48823.

NEW EXPANDING OPPORTUNITIES for family physicians and physicians specializing in pediatrics, internal medicine, anesthesiology, in medically awakening community. Contemporary, automated, 110 bed new hospital opening March 1, 1971. Patient service area 50,000 people. Medical staff leading and supporting recruitment efforts. Excellent community location, 40 miles equidistant to Milwaukee and Madison, Wisconsin. Complete educational, cultural and recreational facilities. New medical dental building and 130 bed skilled hospital care nursing home being constructed adjacent to the new hospital ready for occupancy in the Spring of 1971. Immediate satisfaction in practice, income and family living. Special assistance if needed. Write or call Dr. Paul R. Glunz, Watertown Memorial Hospital, Watertown Area Health Care Center, Watertown, Wisconsin 53094. Tel: (414) 261-4210 for more information.

PSYCHIATRIC RESIDENCY: 1100 bed university affiliated Medical Center. Fully approved three year training program in individual and group therapy, Child psychiatry, psychiatric consultation, medicolegal experience, basic and clinical neurology, dynamic clinical experience and all other essential services. Emphasis on general hospital and out-patient practices. Stipends from $14,000 to $16,000 ($1,000 less for candidates without internship). For further details and consideration submit your resume to: Dr. Robert Schoback, Director of Psychiatric Training, Henry Ford Hospital, Detroit, Michigan 48202.

Advertisers in MICHIGAN MEDICINE are friends of the profession. By accepting their advertising we show confidence in them, their services and products. They help make the journal a quality publication. Please familiarize yourself with their services and products and let them know that you see their advertising in MICHIGAN MEDICINE.

Ec-
on-
omy!

Dicarbosil®
ANTACID

Your ulcer patients and others will appreciate it. Specify DICARBOSIL 144's—144 tablets in 12 rolls.

ARCH LABORATORIES
319 South Fourth Street, St. Louis, Missouri 63102

Established 1924

MERCYWOOD HOSPITAL

4038 Jackson Road Conducted by Sisters of Mercy Ann Arbor, Michigan

Telephone — 313 663-8571

Mercywood Hospital is a private neuropsychiatric hospital licensed by the Michigan Department of Mental Health. Mercywood specializes in intensive, multi-disciplinary treatment for emotional and mental disorders.

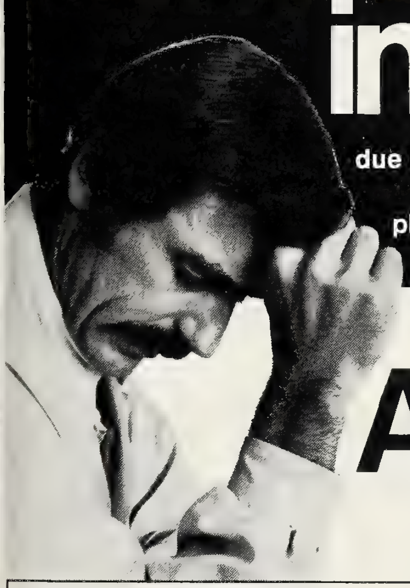
Accredited by the Joint Commission on Accreditation of Hospitals and the National League of Nursing. A full Blue Cross participating hospital.

Certified for: Medicare and M.A.A. programs

PSYCHIATRIC STAFF

Lyle M. Allis, M.D.
Robert J. Bahra, M.D.
Dean P. Carron, M.D.
Francis M. Daignault, M.D.
Gordon C. Dieterich, M.D.
James R. Driver, M.D.
Robert L. Fransway, M.D.
Stuart M. Gould, Jr., M.D.
Leonard E. Himler, M.D.*
Sydney Joseph, M.D.
Hubert Miller, M.D.
Jacob J. Miller, M.D.
Rudolf Nobel, M.D.
Gerard M. Schmit, M.D.
Richard D. Watkins, M.D.

*1904-1967



The treatment of

impotence

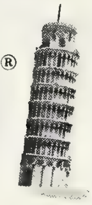
due to androgenic deficiency in the American male. The concept of chemotherapy plus the physician's psychological support is confirmed as effective therapy.

NEW CLINICAL STUDY

The Treatment of Impotence
with Methyltestosterone Thyroid
(100 patients — Double Blind Study)
T. Jakobovits
Fertility and Sterility, January 1970
Official Journal of the
American Fertility Society

Android®

(thyroid-androgen) tablets



Double-Blind Study and Type of Patient: 100 patients suffering from impotence. Of the patients receiving the active medication (Android) a favourable response was seen in 78%. This compares with 40% on placebo. Although psychotherapy is indicated in patients suffering from functional impotence the concomitant role of chemotherapy (Android) cannot be disputed.

Choice of 4 strengths:

Android

Each yellow tablet contains:

Methyl Testosterone	2.5 mg.
Thyroid Ext. (1/6 gr.)	10 mg.
Glutamic Acid	50 mg.
Thiamine HCL	10 mg.

Dose: 1 tablet 3 times daily.

Available:
Bottles of 100, 500, 1000.

REFER TO PDR

Android-HP

HIGH POTENCY

Each red tablet contains:

Methyl Testosterone	5.0 mg.
Thyroid Ext. (½ gr.)	30 mg.
Glutamic Acid	50 mg.
Thiamine HCL	10 mg.

Dose: 1 tablet 3 times daily.

Available:
Bottles of 100, 500, 1000.

Android-X

EXTRA HIGH POTENCY

Each orange tablet contains:

Methyl Testosterone	12.5 mg.
Thyroid Ext. (1 gr.)	64 mg.
Glutamic Acid	50 mg.
Thiamine HCL	10 mg.

Dose: 1 or 2 tablets daily.

Available:
Bottles of 60, 500.

Android-Plus

WITH HIGH POTENCY
B-COMPLEX AND VITAMIN C

Each white tablet contains:

Methyl Testosterone	2.5 mg.
Thyroid Ext. (¼ gr.)	15 mg.
Ascorbic Acid (Vit. C)	250 mg.
Thiamine HCL	25 mg.
Glutamic Acid	100 mg.
Pyridoxine HCL	5 mg.
Niacinamide	75 mg.
Calcium Pantothenate	10 mg.
Vitamin B-12	2.5 mcg.
Riboflavin	5 mg.

Dose: 2 tablets daily.

Available: Bottles of 60, 500.

Contraindications: Android is contraindicated in patients with prostatic carcinoma, severe cardiorenal disease and severe persistent hypercalcemia, coronary heart disease and hyperthyroidism. Occasional cases of jaundice with plugging biliary canaliculi have occurred with average doses of Methyl Testosterone. Thyroid is not to be used in heart disease and hypertension.

Warnings: Large dosages may cause anorexia, nausea, vomiting abdominal pain, diarrhea, headache, dizziness, lethargy, paresthesia, skin eruptions, loss of libido in males, dysuria, edema, congestive heart failure and mammary carcinoma in males.

Precautions: If hypothyroidism is accompanied by adrenal insufficiency the latter must be corrected prior to and during thyroid administration.

Adverse Reactions: Since Androgens, in general, tend to promote retention of sodium and water, patients receiving Methyl Testosterone, in particular elderly patients, should be observed for edema.

Hypercalcemia may occur, particularly in immobilized patients: use of Testosterone should be discontinued as soon as hypercalcemia is detected.

References: 1. **Montesano, P., and Evangelista, I.** Methyltestosterone-thyroid treatment of sexual impotence. Clin Med 12:69, 1966. 2. **Dublin, M. F.** Treatment of impotence with methyltestosterone-thyroid compound. West Med 5:67, 1964. 3. **Titeff, A. S.** Methyltestosterone-thyroid in treating impotence. Gen Prac 25:6, 1962. 4. **Hellman, L., Bradlow, H. L., Zumoff, B., Fukushima, D. K., and Gallagher, T. F.** Thyroid-androgen interrelations and the hypocholesteremic effect of androsterone. J Clin Endocr 19:936, 1959. 5. **Farris, E. J., and Colton, S. W.** Effects of L-thyroxine and liothyronine on spermatogenesis. J Urol 79:863, 1958. 6. **Osol, A., and Farrar, G. E.** United States Dispensatory (ed. 25). Lippincott, Philadelphia, 1955, p. 1432. 7. **Wershub, L. P.** Sexual Impotence in the Male. Thomas, Springfield, Ill., 1959, pp. 79-99.

Write for literature and samples: BROWN **THE BROWN PHARMACEUTICAL CO., INC.** 2500 West 6th Street, Los Angeles, California 90057

Someone acutely ill needs this bed.

It's available because of Medicenter.

Because of Medicenter, this hospital bed can be used by someone who needs it. That's what Medicenter is all about. A recuperative care facility specializing in the needs of patients who no longer require the intensive care of a general hospital and who are on the road to recovery.

But that's only part of the Medicenter story . . . Beautifully carpeted and draped patient rooms, tasty foods, recreation facilities, physical and inhalation therapy are just a few of many luxurious health care features that make recovery in the Medicenter as pleasant and rapid as possible. The Medicenter is within minutes of acute care facilities. A professional medical staff supervises all recuperative care under the direct orders of each patient's personal physician. Room rates are nominal — about one-half the cost of general hospitals. And there's a growing list of insurance companies that already provide coverage for Medicenter recuperation.

The Medicenter is a vital addition to our community's health care system. Get to know the Medicenter soon. Your visit or inquiry is welcome anytime.

MEDiCENTER
OF AMERICA
®

A Nice Place to Get Well

Medicenter of America / Chelsea • Escanaba • Flint, Michigan

Masai villagers on the border of Kenya and Somalia were vaccinated recently against cholera by Sarah Schooten, MD, Detroit, long-time Michigan doctor who was named one of the six recipients of the 1970 MSMS Certificates of Commendation. Doctor Schooten traveled to Kenya for two weeks this winter to be part of an American medical team bringing measles and cholera vaccine to the highly-susceptible Africans. Doctor Schooten, 76, carries on a full-time practice in Detroit, where she is affiliated with Providence Hospital and the Sarah Fisher Children's Home.

The MSMS Judicial Commission expects at its April 14 meeting to give final approval to its revised draft of procedures governing the ethics of members' conduct. Members of the commission, photographed at a recent meeting, are led by Donald N. Sweeny, MD, Detroit, head of the table. Assisting him at the meeting was Mrs. Vada L. Davis, MSMS staff assistant.

Around the table at the Judicial Commission meeting are, from left foreground, Harold A. Furlong, MD, Pontiac; Sherman E. Andrews, MD, Kalamazoo; Clarence S. Livingood, MD, Grosse Pointe; R. Wallace Teed, MD, Ann Arbor; Eugene L. Freitas, MD, Detroit; H. Maxwell Golden, MD, Flint, and C. Allen Payne, MD, Grand Rapids.

A portion of the large group of medical students and their spouses was greeted by Louis R. Zako, MD, vice speaker of the Michigan Academy of General Practice, at the first meeting of the Wayne Family Practice Forum.

Important persons at the Family Practice Forum meeting included, from left, Joseph Fisher, MD, president-elect of the MAGP; Andrew Hopkins, MD, president-elect of the Wayne County Chapter of the MAGP, and a member of the panel; Doctor Zako; Colleen Haberstroh, MD, Midland, director of student health at Northwood Institute and a panel member, and George Dean, MD, adjunct member of the Department of Community and Family Medicine at WSU, also on the panel.

"Sex and Family Counseling" was the topic of the first meeting early in March of the new Wayne Family Practice Forum, for Wayne State University medical students and their spouses. The Forum has been established by the Michigan Academy of General Practice, in cooperation with WSU students and the Marion Laboratories. Future topics of the group, designed to give family physicians an opportunity to meet on an informal basis with the medical students, will be medical care of the poor, the personal life of the family physician, and common medico-legal problems in family practice. Scenes of the first meeting at Wayne County Medical Society headquarters are shown on this page.

Two WSU medical students, David Ostrowski, left, and Russ Van Houzen, right, met George Mogill, MD, Huntington Woods, member of the Forum planning committee.

A total of 118 young patients were moved March 1 from the old to the new Children's Hospital in Detroit, the final step in the development of the new 320-bed facility at 3901 Beaubien. The youngsters, from premature infants to 13-year-olds, were each accompanied by a doctor, nurse, medical or nursing student or hospital volunteer. The older children each carried a brown paper bag stuffed with toys and clothing during their bus ride from one hospital to the other. These photos, taken by the DETROIT NEWS, present some of the strategic moments in the move.

Little Harry Baugh is checked out by Mrs. Kathleen Surowiec, assistant nursing supervisor, assisted by Peter DeRidder and volunteer Mrs. Thelma Torrence.

Doctors and attendants of Children's Hospital transfer a baby in an isolette to a waiting ambulance.

Nurses each feed a tiny patient on their first day in the new nursery.

Louis R. Zako, MD, Allen Park, left, chairman of the MSMS Committee on Public Health discussed environmental problems with his committee members late in February. Among those at the meeting were Roscoe C. Hildreth, MD, Kalamazoo, center, advisor to the committee, and Jack R. Ryan, MD, Sterling Heights.

Public Health Committee discusses the environment

Before the Public Health Committee meeting convened, John L. Isbister, MD, Lansing, seated, chatted with Edward J. Klopp, Jr., MD, Battle Creek, while Helen A. Schulte, MSMS staff assistant to the committee, went over meeting plans with Max E. Dodds, MD, Flint, background.

Participants in the 10th Annual Thyroid Workshop of the Wayne State University School of Medicine included, from left, Brown M. Dobyns, MD, Cleveland; Robert C. Douglass, MD, Adjunct Assistant Professor of Internal Medicine at WSU; Nelson M. Taylor, MD, WSU Adjunct Associate Professor of Internal Medicine; Edwin B. Astwood, MD, Boston; and Myer Teitelbaum, MD, WSU Adjunct Assistant Professor of Internal Medicine. Doctor Taylor served as general chairman of the all-day workshop held at the headquarters of the Wayne County Medical Society.

Michigan Medicine

Breaking News: Deadline, March 25
April 1971, Volume 70, Number 8
Michigan State Medical Society

Methadone maintenance not feasible for private physician, AMA states

A combined statement on oral methadone maintenance techniques in the management of morphine-type dependence has been released by the Committee on Alcoholism and Drug Dependence of the AMA and the Committee on Problems of Drug Dependence of the National Research Council.

The statement says:

“1. Methadone maintenance programs should include at least the following elements in order to constitute proper medical practice:

a. adequate facilities for the supervised collection of urine and for frequent and accurate urine testing for presence of morphine and other drugs,
b. general medical and psychiatric services,
c. hospital facilities as needed,
d. adequate staff,
e. rigid controls of methods of dispensing methadone to prevent diversion to illicit sale or to possible intravenous use.

“2. Care should be exercised in the selection of patient to prevent the possibility of causing the person who has not been dependent on heroin to become dependent on methadone.

“3. There should be continued evaluation of the long-term effectiveness of methadone programs for persons who are stabilized on an inpatient or an ambulatory outpatient basis.

“4. Where feasible, staff members of new methadone maintenance programs should be trained in this technique in an established effective program.

“5. Continuing research is essential particularly with reference to:

a. The use of properly trained practicing physicians as an extension of organized methadone maintenance programs in the management of those patients whose needs for allied services are minimal. These patients should remain in contact with the methadone maintenance program for periodic evaluation, including urine testing.
b. the role of methadone maintenance in the treatment of heroin dependent patients under age 18 years.
c. the use of methadone maintenance in combination with other approaches to the treatment of morphine-type dependence.

“Methadone maintenance is not feasible in the office practice of private physicians. The individual physician cannot provide all of the services for the various therapeutic

Capsules

Ten Michigan community hospitals, ranging in size from 50 to 250 beds, have received grants from the Kellogg Foundation to develop and staff coronary care units under a demonstration program conducted by heart specialists, CCU nurses, architects and postgraduate medical education experts from the University of Michigan.

Over 50 Michigan physicians with experience in treating cardio-vascular disease have also agreed to act as members of the U-M postgraduate teaching faculty in the program. It is hoped that the number of hospitals participating will triple over a three-year period to blanket the entire state with CCUs.

* * *

The MSMS Council has approved co-sponsorship by MSMS and the Michigan Association of Osteopathic Physicians and Surgeons of a series of eight regional seminars on medical examiner work. An Ad Hoc Committee on the Medical Examiner System, consisting of representatives of MSMS and the MAOPS has been meeting to study the subject.

MSMS members on the committee

Coaches and team trainers from hundreds of Michigan high schools and colleges are expected in East Lansing April 22 for the SIXTH ANNUAL CONFERENCE ON THE MEDICAL ASPECTS OF MICHIGAN HIGH SCHOOL SPORTS.

James Feurig, MD, East Lansing, director of the MSU Student Health Services and conference program chairman, urges Michigan physicians to take the initiative to invite their local coaches and athletic trainers to the conference. The MSMS Committee on the Medical Aspects of Organized Athletics is sponsoring the workshop.

are William A. DeYoung, MD, Saginaw, chairman; Warren E. Bontrager, MD, Mio, and Richard B. Michelson, MD, Flint.

* * *

MSMS is endorsing a broad licensing of operators of recreational vehicles including snowmobiles, in efforts to control and educate the public in the use of the vehicles. MSMS would like age restrictions and requirements set up comparable to those required for operating automobiles. A public information campaign discussing the hazards of recreational vehicle operation and endorsing licensing of operators has been started by MSMS after approval by The Council.

* * *

The MSMS Council at its March 10 meeting authorized the MSMS Committee on Utilization Review and Health Insurance Problems to meet with Blue Shield officials to discuss the use of Blue Shield Form 5505, automatic deductions from physicians' checks and statistics regarding charge information.

* * *

Herbert Sloan, MD, new head of the section of Thoracic Surgery at the University of Michigan Medical Center, succeeds the late Cameron Haight, MD, and not Donald Kahn, MD, as stated in the March issue of **Michigan Medicine.**

* * *

Annual elections have been completed by The MSMS Council. Robert Whiteley, MD, Detroit, is a new member of the MSMS Board of Managers; John J. Coury, MD, Port Huron, is the new assistant secretary of MSMS, and John W. Moses, MD, Detroit, was elected as scientific editor of **Michigan Medicine.**

* * *

The MSMS Committee on Hospital Relations is expected to approve April 7 the final draft of questions on efficiency of hospitals and their medical staffs. The questions will be included in a survey to be mailed by the committee to all hospitals affiliated with the Michigan Hospital Association. Purpose of the survey is to provide a bank of successful efficient hospital projects to be drawn on by other hospitals for their possible use.

* * *

The MSMS Committee on Highway Injury is continuing in its determination to upgrade the training of attendants and improve the equipment required in ambulances. The committee is pressing for a comprehensive two-year program for emergency medical technicians, but feels

needs of the patient. The individual physician also is not in a position to assure control against redistribution of the drug into illicit channels, to maintain control of doses, or to establish the elements for proper evaluation of the treatment. Practicing physicians, however, should cooperate with methadone maintenance programs in their communities and offer whatever services they may be capable of providing."

Here is MSMS definition of Peer Review

The MSMS official definition of peer review, as adopted at the March 10 Council meeting, is "a review of physician's services by his colleagues, embracing evaluation of the quality of care provided, the frequency, volume and relationship of services offered to the pertinent diagnosis and the propriety of the charges submitted for the professional services rendered." The definition is to be included in the "Guidlines for MSMS Peer Review Program" being developed by the MSMS Committee on Utilization Review and Health Insurance Problems.

MSMS seeks to exempt Canadian MDs from basic science

The MSMS Council has referred to the Legal Affairs Committee a campaign to seek a change in the licensing requirement so that physicians graduating from recognized Canadian medical schools will be exempted from the basic science examination. Graduates of recognized American medical schools were exempted under the basic science amendment passed by the Michigan legislature in 1970.

New MSMS Economics Bureau has first chief

John Anthony, 25, assumed duties March 22 as chief of the MSMS Bureau of Economic Information. Mr. Anthony reports to the MSMS Department of Operations and Economics.

Mr. Anthony, who was senior financial analyst with William Beaumont Hospital in Royal Oak before joining MSMS, also served as an economic analyst with Michigan Consolidated Gas Co. His work experience is in the areas of budget and statistical analysis, cash flow forecasting, cost accounting and reporting, economic justification analysis and operating statement analysis.

Selective Service calls for 61 Michigan MDs

Michigan local Selective Service boards will be asked to deliver 61 doctors of medicine, seven doctors of osteopathy and 13 dentists for service in the armed forces starting July 1.

Approximately 150 mid-Michigan physicians studied the fundamentals of nuclear medicine in the management and evaluation of diseases of the brain, heart, kidney, liver, thyroid, pancreas, spleen and bone at a day-long continuing education meeting recently at E. W. Sparrow Hospital, Lansing. Speakers and leaders of the seminar were, from left, D. Bruce Sodee, MD, director, Nuclear Medicine, Hillcrest Hospital, Mayfield Heights, Ohio; C. Harold Steffee, MD, pathologist, Moore Memorial Hospital, Inc., Pinehurst, N.C.; James Hanje of Nuclear-Chicago, one of the sponsors; J. C. Spencer, MD, director, Department of Nuclear Medicine, Sparrow Hospital; Bruce Alderman of the MSU Continuing Education Service; Larry Windedahl of Nuclear-Chicago; John Dunkel, MD, co-director, Department of Laboratories, Sparrow Hospital, and Mrs. Sodee.

MD DRAFT CALL/Continued

The call is part of a national draft of 1,531 doctors of medicine, 77 doctors of osteopathy and 536 dentists.

The draft of doctors will take those under 26 first, in order of their random sequence numbers, then go to those age 26 and over. All will be offered a commission and if accepted, they will not be required to report for induction.

Medical assistants now registering for annual meeting April 29-May 2

Final plans have been made and registrations are being taken for the 1971 annual meeting April 29-May 2 of the Michigan State Medical Assistants Society. Weber's Motor Inn in Ann Arbor will be the site of the convention, with some sessions to be located in the Towsley Center for Continuing Medical Education at the University of Michigan Medical Center.

Registration and reservation forms appear below:

CAPSULES/Cont.

an interim program is necessary now.

* * *

Debate about changes in welfare provisions of H.R. 1 (Social Security Amendments of 1971) will delay the report of the House Ways and Means Committee on the bill until after Easter, according to AMA office in Washington.

* * *

The Health Insurance Association will list the MSMS Committee on Utilization Review and Health Insurance Problems as the receptacle for commercial insurance carrier questions about fee adjudication, etc. The MSMS committee will refer all matters to the appropriate component societies. Larger county medical societies may request special listing with HIA if they so desire.

Registration Form

Luncheon — Friday, April 30		$5
Luncheon — Saturday, May 1		5
Banquet — Saturday, May 1		8
REGISTRATION FEE:	Member	$6
	Non-Member	$8

Total Enclosed ....$________

Name________________________________

Address______________________________

____
County

DEADLINE ....April 21, 1971

Make Checks payable to: LOUISE COLE

☐ Check here if this is the first MSMAS CONVENTION you have attended

Reservation Form

☐ Thursday, April 29
☐ Friday, April 30
☐ Saturday, May 1

Name________________________________

Address______________________________

____

Please reserve ________room(s) with:

☐ 1 double bed
☐ 2 double beds

For___________person(s)

DEADLINE ....April 21, 1971

MICHIGAN STATE MEDICAL ASSISTANTS SOCIETY

Two MSMS members have been re-elected as section delegates to the AMA. They are Clarence S. Livingood, MD, Detroit, Dermatology, and Harold F. Falls, MD, Ann Arbor, ophthalmology. Their two-year terms expire in 1972. Harold Magnuson, MD, Ann Arbor, is continuing as alternate delegate for the Preventive Medicine Section, for a term expiring in 1971.

* * *

MSMS is a new sponsor of the Michigan Women for Highway Safety, after the Council at its March 10 meeting approved a recommendation of the MSMS Committee on Highway Safety. The 3,000-woman organization invited MSMS to join the many other citizen-oriented and safety groups who have lent their support to the MWHS, a state-wide public information and citizen group concerned about highway safety problems.

* * *

Several members of the Detroit press corps heard statements March 18 of MSMS concern over the health hazards of snowmobiles and the need for better emergency health care. Speaking to the press at a late-afternoon press conference at the Wayne County Medical Society headquarters were Paul W. Gikas, MD, Ann Arbor, chairman of the MSMS Committee on Highway Injury, and Charles F. Frey, MD, chairman, Michigan Emergency Medical Service Health Council.

* * *

Members of an MSMS ad hoc committee, approved March 10 by the Council, are yet to be named to serve as a liaison with a new 12-member legislative study committee on malpractice and professional liability. The MSMS ad hoc committee is to include one member each from The Council, Legal Affairs Committee, Professional Insurance Committee and the MSMS Liaison with the State Bar Committee.

The legislative study committee was created by Senate Concurrent Resolution 28, to make a year-long study and will be advised by a 15-member citizens advisory committee of physicians, attorneys, insurance carriers and the public. Resolution 28 was passed by both Houses of the Legislature after successful efforts by MSMS.

* * *

Albert E. Heustis, MD, program coordinator since Sept. 30, 1967, of the Michigan Association for Regional Medical Programs, has retired from the post and is moving soon to Three Rivers. Doctor Heustis headed the state health department for 19 years prior to joining MARMP.

Doctor Zako to preside at May 19 MDPAC meeting

When the Michigan Doctors Political Action Committee meets again May 19 at MSMS headquarters, Louis R. Zako, MD, Allen Park, will be at the helm. Doctor Zako was elected new chairman at the MDPAC March 10 meeting, to succeed Donato Sarapo, MD, Adrian, who declined re-election. Thomas Berglund, MD, Kalamazoo, is the new secretary-treasurer.

The topic at the May 19 MDPAC meeting is likely to be plans for the 1971 MSMS Annual Session in Grand Rapids. William Zimmerman, MD, Grand Rapids, is in charge of this year's MDPAC Congressional Luncheon.

All MSMS members urged to cooperate in costs survey

At deadline for these pages, the new MSMS Bureau of Economic Information was to mail early this month its survey of "trends in the overhead cost of medical practice."

The mailing to all MSMS members is the first survey to be conducted by the Bureau. It will be followed shortly by another on the current, customary charges for high-frequency procedures by medical specialties.

Questions for the survey of overhead cost trends were pre-tested by the MSMS Committee on Medical Socio-Economics and final approval of the survey was expected at the March 24 meeting of the committee.

Committee chairman Dale Kessler, MD, Grand Rapids, urges the cooperation of MSMS members to provide "a benchmark to the individual physician in his medical practice.

"Now is the time to participate so that we can have this comparative data for possible future negotiations concerning fees for Medicaid and other government programs," emphasizes Doctor Kessler.

Wayne med students to contract with Michigan communities

Wayne State University medical students have announced a program that calls for contracts between individual medical students and communities, in which the student agrees to work in the community after graduation for a specified time in return for contributions toward his tuition.

The program is an attempt to alleviate the shortage of Michigan physicians in small communities, and also to aid the students with their financial problems.

In February student representatives met with the Niles Chamber of Commerce. The Muskegon County Medical Society has also expressed interest.

U. C. SAN FRANCISCO
MEDICAL CENTER LIBRARY
MAY

Michigan Medicine

News Extra: Deadline, April 12
April 1971, Volume 70, Number 9
Michigan State Medical Society

Be sure to fill out, mail overhead costs survey by May 12

The first-ever survey by MSMS on the overhead costs of Michigan physicians' practices is in the mails on the way to all MSMS members. The surveys were mailed April 19, with a return deadline of May 12.

The questionnaire, designed to identify current trends in the costs of medical practice, was pre-tested by members of the MSMS Committee on Medical Socio-Economics, who helped draft the form along with MSMS staff members and consultants.

The one-page study is to be answered anonymously, and will be tabulated by the new MSMS Bureau of Economic Information. Data will be reported according to county medical societies, as well as on the statewide basis, by specialty of the answering physician, his age, legal form of practice and size of group practices.

Fiscal problems overshadowing health bills before Michigan legislature

Michigan's Legislature reached its Spring recess April 8 with the state's critical fiscal problem overshadowing all other functions.

Those "in the know" assert no new appropriations bills will be enacted until new tax measures are first enacted to assure state income. The tax picture is fuzzy; tax resistance is strong.

All this has significant meaning to Doctors of Medicine: 1) Without a new Social Services appropriations bill, the likelihood of continuing 90 per cent payments for Medicaid services after July 1 looms large; 2) Anticipated growth of medical school student bodies in the 1971-72 academic year is clouded.

Meanwhile, only two health-oriented measures have moved out of their original committee assignment.

The abortion reform bill (Senate Bill 3) passed the Senate March 15 and now lies before the House of Representatives Committee on Social Services and Corrections. Rep. David Holmes, committee chairman, launched a series of public hearings on the bill. The bill, which provides exemption from criminal and civil liability to doctors of medicine and osteopathy for performing abortions, carries a number of restrictions: Hospitals, clinics and facilities where abortions are performed must be licensed by the Department of

Capsules

Wayne State University medical alumni will gather May 12 at the Sheraton-Cadillac Hotel, Detroit, for their 103rd Reunion and Clinic Day program, a day-long series of scientific meetings and social events.

Theme of the program is "Prescription for Survival: A Conference on Environmental Health and Pollution." Arnold R. Axelrod, MD, Detroit, program chairman, has arranged for the featured speaker at the luncheon to be James H. Brickley, Michigan's lieutenant governor.

Reservations may be made by writing Alumni House, Wayne State University, Detroit, 48202.

* * *

A new Michigan Society of General Surgeons is being formed, led by a 12-man board of directors from around the state. Glenn E. Moore, MD, Flint, is acting chairman. Introductory letters from Doc-

Plan now for Doctors', Wives' Art Show Oct. 6

Doctor, do you enjoy painting, sculpting, photography, crafts and/or pottery-making? How about the Mrs.?

If so, you will have a chance to show off your efforts at the Doctors' and Wives' Art Show planned as a feature of the 1971 MSMS Annual Session Oct. 3-7 in Grand Rapids. The art show will be set up in the Civic Center, across the street from the Pantlind Hotel, headquarters for the Annual Session.

Sponsoring the art show is the Woman's Auxiliary to MSMS. Chairman is Mrs. William Sprague of Grand Rapids. Judging is planned for Wednesday morning, Oct. 6.

CAPSULES/Cont.

tor Moore were mailed April 5 and 6 to all general surgery specialists in the state, inviting them to affiliate.

Purpose of the new organization is to give general surgeons protection in their economic interests when dealing with governmental and other third parties, according to Doctor Moore's letter. The society also will gather economic information regarding its specialty. It plans to work closely with the new MSMS Bureau of Economic Information.

* * *

Of the graduating senior medical students taking part in the new computerized intern-resident matching program, 61.5 percent at the University of Michigan and 69.1 percent of the Wayne State University students received their first choices.

Results of the nationwide matching system were released the first week in April at the two Michigan schools. The percentage of those students getting one of their first three choices for locations of internships and residencies was 90.8 percent at Wayne and 89 percent at the U-M.

Forty-one percent of this year's graduating U-M doctors will remain in hospitals in Michigan, while over 39 percent of the Wayne graduates will continue with internships or residencies in Michigan.

* * *

MSMS members and their families are again invited on an Orient Adventure, a 14-day jet trip to Japan and Hong Kong departing Oct. 11. Letters of invitation went to members of MSMS and the Woman's Auxiliary on April 1.

Cost of the trip, the second arranged to the Orient by the MSMS Committee on Group Travel Plans, is $898 per person. It includes an optional side trip to Bangkok, capital of Thailand; flight to and from the Orient by chartered 707 jet; seven days in Tokyo and no regimentation.

Reservation forms will be available in the May and June issue of **Michigan Medicine.**

* * *

"The Care of Old People—Creating the Humane Environment," is the title of the 24th annual Conference on Aging planned by the Institute of Gerontology of the University of Michigan and Wayne State University. The conference is planned June 7-9 at the Rackham Building, the U-M, Ann Arbor.

* * *

A. James French, MD, Ann Arbor, is the secretary of the new AMA Section Council on Pathology.

Status of Legislation with Significance for Medicine

	House of Representatives			Senate		
	In Comm.	On Floor	PASSED	In Comm.	On Floor	PASSED
Senate Bill 3—to reform Abortion Laws and prescribe restrictions.	X			X	X	X
Senate Bill 196—to exempt patient privilege when physician believes patient dangerously disturbed.				X		
Senate Bill 39—to lower blood alcohol content for presumed intoxication.	X			X	X	X
House Bill 4056—to create control "Physician's Assistant."	X					
House Bill 4085—to extend "Good Samaritan" concept to ambulance drivers and physicians giving instructions.	X					
House Bill 4321—(Same as Senate Bill 196.)	X					
APPROPRIATIONS:						
Senate Concurrent Resolution 47 urging establishment of Department of Family Practice in medical schools.	X					

HEALTH LEGISLATION/Continued

Public Health; parental consent is required for minors; husband consent is required if the couple is living together; abortions can be performed only in the first 90 days of pregnancy. Best bet: That the Committee will report the bill to the full House without recommendation, and that a final vote will be taken by early summer. At this time is is difficult to find the required 56 votes for passage.

Senate Bill 39, which would lower blood alcohol content from .15 per cent to .10 per cent for presumed intoxication, and raise the content level from .05 to .07 per cent for presumed impaired driving ability, passed the Senate March 10 and now lies before the House Committee on Judiciary. A similar bill, House Bill 4168, also is under consideration by the Committee on Judiciary.

Providers win more voice in metropolitan planning

Health providers in the seven counties of the Comprehensive Health Planning Council of Southeastern Michigan won their point, and a 45%-55% ratio on the Board of the Council, after refusing to endorse the original 40-60 representation of providers and consumers, respectively.

Only after settlement of the board issue, which received provider endorsement, did health providers in the seven-county area object to an initial 60-40 percent consumer/provider representation on the Council. After refusing endorsement and several meetings between the organizers and health providers the composition of the Board was adjusted to a 55-45 consumer/provider ratio.

During this interim, approval of the five year planning grant application under Section 314 (b) of Public Law 89-749 by HEW was deferred.

The Southeastern Michigan Council received its $1.2 million, five-year grant from the Department of Health, Education and Welfare; $240,000 per year, to be matched with funds from the United Foundation and the county governments of Livingston, Macomb, Monroe, Oakland, St. Clair, Washtenaw and Wayne Counties. Representatives of the medical and hospital communities, labor, business, and local and county governments now plan to band together to strive for free, accessible pre- and post-natal care, more patient clinics, more and better emergency health services, more doctors and allied health personnel, lower hospital costs and a healthier environment.

U-M interns, residents voting whether to become bargaining unit

University of Michigan interns, residents and post-doctoral fellows will vote April 21 in Ann Arbor and April 24 at Wayne County General Hospital to decide whether they wish to organize as a collective bargaining unit with the university.

The interns and residents won the right to be considered a bargaining unit, if they so choose, in a 2-1 split decision of the Michigan Employment Relations Commission late in March.

The university has since asked the Michigan Court of Appeals to accept an appeal of the decision.

MSMS officers to present legislative opinions to governor

Five MSMS officers will meet April 28 with Gov. William G. Millliken in the governor's office.

Their appointment is the outcome of an informal meeting March 24 between the governor, Robert C. Prophater, MD, Bay City, chairman of the MSMS Legislative Policy Committee, and Bruce Ambrose, manager of the MSMS Governmental Affairs Department.

Meeting with the governor April 28 will be Doctor Prophater; Ross V. Taylor, MD, Jackson, chairman of the MSMS Council; Kenneth Johnson, MD, Lansing, chairman of the MSMS Legal Affairs Committee; Vernon V. Bass, MD, Saginaw, speaker of the MSMS House of Delegates and James J. Fryfogle, MD, Detroit, vice speaker of the MSMS House.

Wayne physicians to be instructed in education, treatment of drug abuse

An important workshop on drug addiction, counseling and treatment is planned April 28 from 9 a.m. to noon at Wayne County Medical Society headquarters, Detroit.

The workshop will present 13 expert consultants on the treatment of addicts, and current developments in drug education.

Frank B. Walker, II, MD, Grosse Pointe, is workshop chairman. Any interested physician is invited.

CAPSULES/Cont.

Current thinking of medical experts on the management of maturity-onset diabetes will be the topic of a symposium planned April 21 at the Sheraton-Cadillac Hotel, Detroit, by the Wayne County Academy of General Practice. The symposium is planned for Michigan physicians, directors of medical education of local hospitals and department heads of medical schools.

* * *

Six members of the University of Michigan Medical School faculty will discuss the diagnosis and treatment of some common medical problems at the seventh annual Northern Michigan Summer Program of the U-M June 14-18 at Shanty Creek Lodge, Bellaire.

On the faculty for the program will be Reed O. Dingman, MD, head, Section of Plastic Surgery; Roland G. Hiss, MD, associate professor of internal medicine and postgraduate medicine; Peter J. Lynch, MD, associate professor of dermatology; John C. Pollard, MD, professor of psychiatry; Harry A. Towsley, MD, chairman, Department of Postgraduate Medicine and professor of pediatrics and communicable diseases, and Walter P. Work, MD, chairman, Department of Otorhinolaryngology.

* * *

"Digitalis: New Thoughts about an Old Drug," is the title of a talk to be presented by one of five featured speakers at the Scientific Sessions of the Michigan Heart Association April 30 at Cobo Hall, Detroit. The Scientific Sessions are part of the MHA's 23rd annual "Heart Days" April 29 - May 1 in Detroit. The talk on digitalis will be presented by James E. Doherty, III, MD, director, Division of Cardiology, University of Arkansas Medical Center and VA Hospital. He presents the theory that "Many patients are getting too much digoxin because of a lack of appreciation of its absorption from the gastrointestinal tract."

Sports-medicine conference looms April 22

An all-pro football end, the Purdue University team physician and University of Michigan football coach "Bo" Schembechler will be among the star attractions at the Annual MSMS Conference on the Medical Aspects of High School Sports April 22 at Michigan State University.

Out-state doctors anticipating PG programs

Once again, the Michigan State Medical Society is presenting its semi-annual series of postgraduate continuing education programs for members around the state.

Lower peninsula meetings:

Alpena—May 20
Battle Creek—May 18
Grand Haven—May 7
Grayling—April 14
Howell—April 21
Manistee—April 22
Midland—May 13
Muskegon—May 17
Niles—May 18
Petoskey—April 22
Port Huron—May 11

Upper peninsula meetings:

Escanaba—May 18
Houghton—May 17
Iron Mountain—May 19
Ironwood—May 18
Marquette—May 20
Menominee—May 19
Sault Ste. Marie—May 17

The development of Health Maintenance Organizations will be among the topics discussed by staff members of MSMS and the Michigan Hospital Association when they meet again during the next few weeks. The two organizations have met twice already to discuss mutual legislative interests.

At the most recent meeting March 22, the MHA divulged plans to seek "Certificate of Need" legislation for new hospital construction and hospital improvements.

* * *

Joseph N. Schaeffer, MD, Detroit, was reappointed by Gov. William Milliken April 6 to a three-year term on the Commission on Employment of the Handicapped. His new term will expire March 5, 1974.

MSMS, members protest stoppage in Medicaid reimbursements

MSMS members received a blueprint for action from MSMS to help resolve Medicaid financial crisis on April 15, in the same mail as the notice from the Medicaid fiscal agent reporting that the Department of Social Services funds were temporarily exhausted.

Responding to MSMS appeals, responsible legislators on April 16 promised to obtain transfer of necessary funds to the Department by April 20. Payments to physicians, hospitals, nursing homes, and pharmacists were stopped on April 9.

MSMS sent copies of a "Notice to My Patients" to physicians with the suggestion they post them to help inform all patients about the government decision to stop payments. The notices assured that "despite all these difficulties, I will continue to provide quality care for all my patients; even though my office costs, salaries, etc., continue each day."

MSMS Shield insurance rates raised

Since April 1, MSMS members have been charged new rates for the MSMS 94000 Group Blue Cross-Blue Shield MVF-2 program. According to type of plan, the new rates are: one person—$20.65 per month; two persons—$54.46 per month; family—$58.77 per month.

The new rates represent a significant increase over comparative rates for 1970 of $16.93 per month, $45.84 per month, and $49.56 per month. The MSMS Committee on Professional Insurance Plans is evaluating plans offered by other companies, and has requested quotations from Cross and Shield on new optional health coverages including deductible and co-insurance features for the MSMS 94000 group.

Michigan
Medicine

MICHIGAN STATE MEDICAL SOCIETY

Published semi-monthly, Trimonthly in December and January, 26 issues, by the Michigan State Medical Society as its official journal. Second class postage paid at East Lansing, Mich. and at additional mailing offices. Yearly subscription rate, $9.00. Printed in USA. All communications should be addressed to the Publications Committee, Michigan State Medical Society, 120 West Saginaw Street, East Lansing, Michigan 48823. © 1971 Michigan State Medical Society. Phone: Area Code 517, 337-1351.

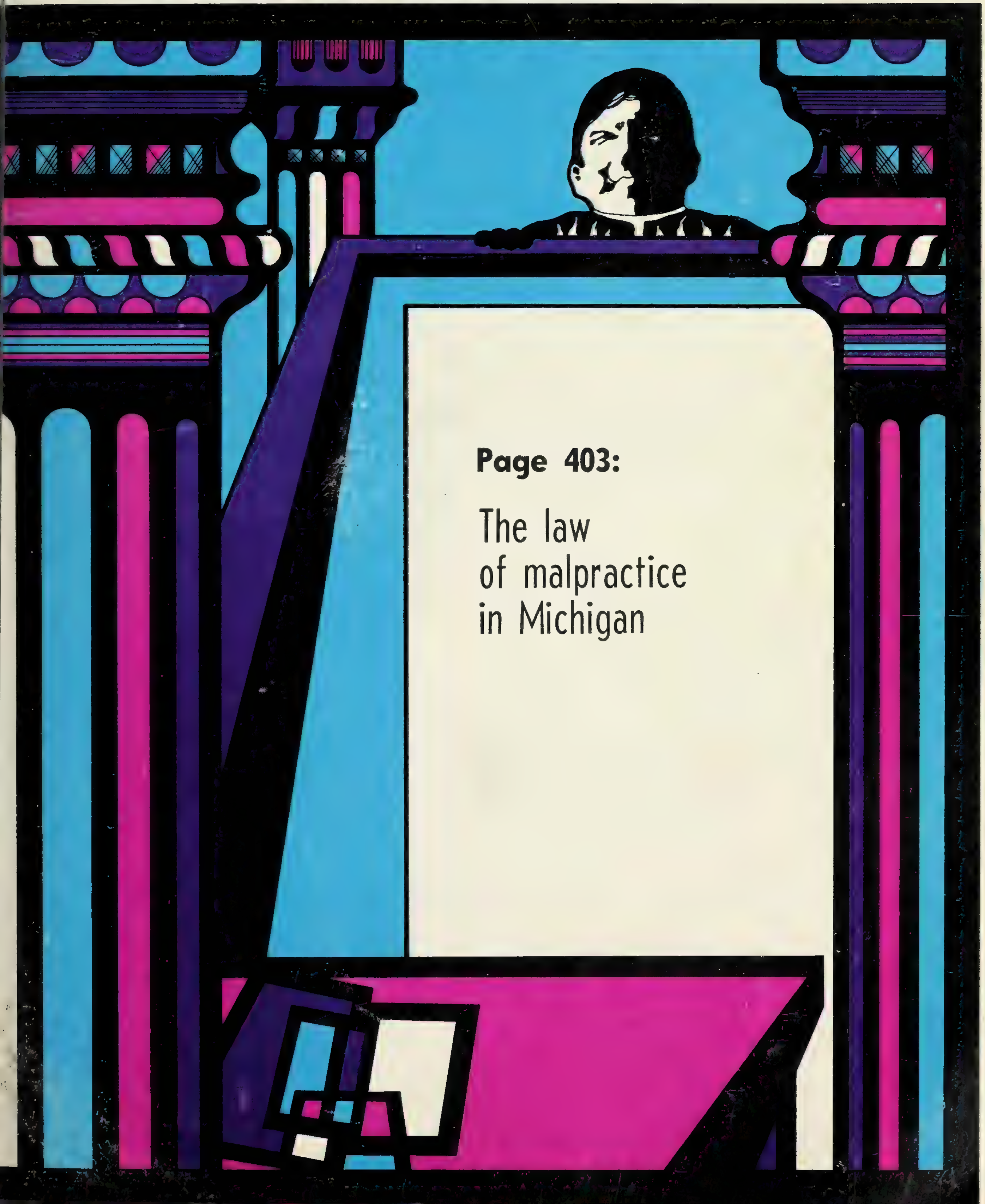
Second Class Postage Paid at East Lansing, Mich.
and at additional mailing offices.

UNIVERSITY OF CAL
LIBRARY SCH OF MED
THIRD & PARNASSUS AVE
SAN FRANCISCO CAL 94122

Attention Librarians: This publication is a regular issue of MICHIGAN MEDICINE and should be saved for binding later with the larger scientific issues of the journal.

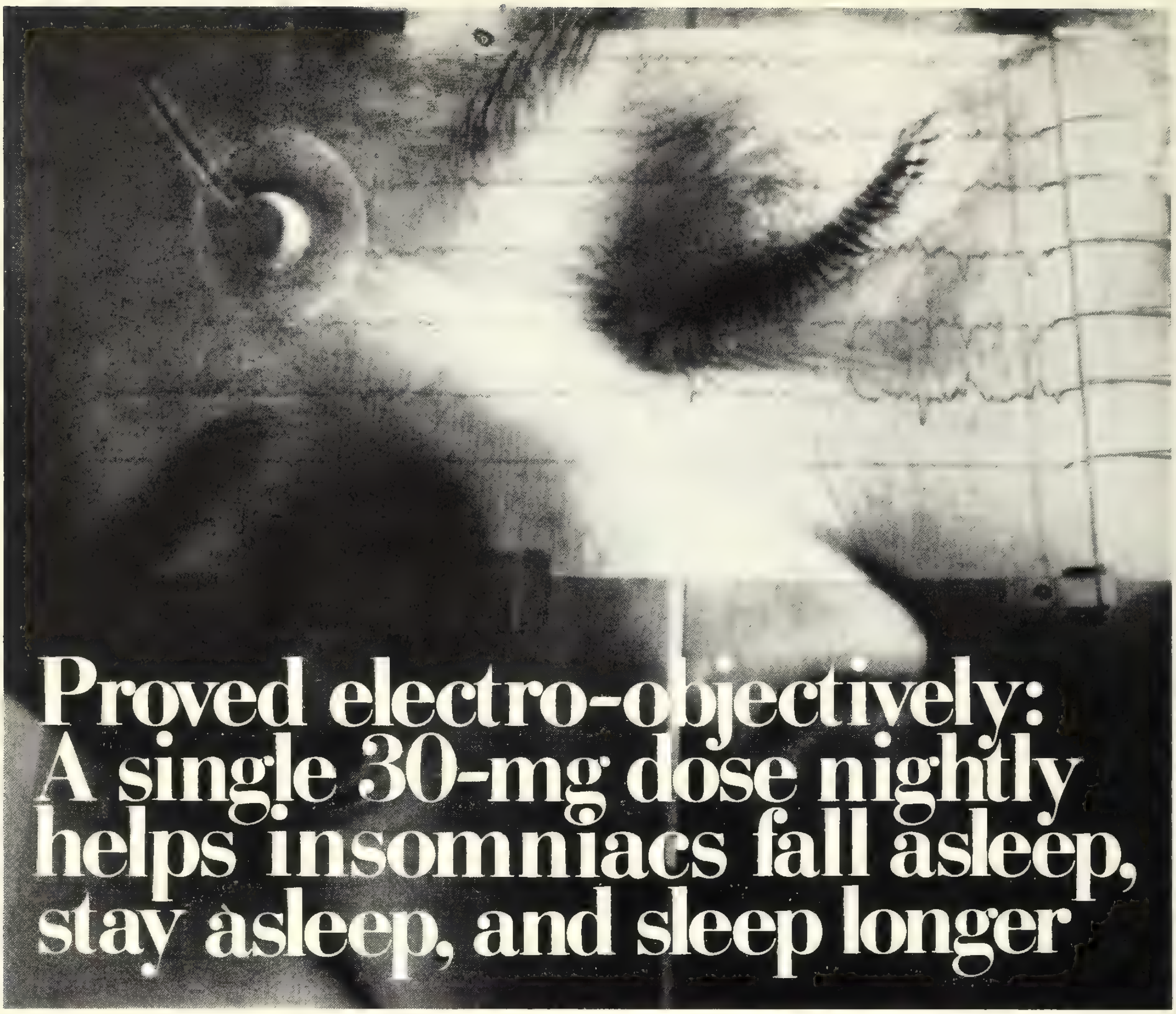
[illegible] COUNTY LIBRARY
MAY 1 [illegible]

Michigan Medicine



Page 403:

The law
of malpractice
in Michigan



Proved electro-objectively: A single 30-mg dose nightly helps insomniacs fall asleep, stay asleep, and sleep longer

Controlled studies of 23 insomniac and 13 normal subjects treated with Dalmane (flurazepam HCl) in five sleep laboratories generated over 4000 hours of electroencephalographic, electro-oculographic and electromyographic tracings. These studies revealed that Dalmane 30 mg nightly usually induces sleep in 22 minutes and provides seven to eight hours of sleep.[1,2,3]

Moreover, Dalmane 30 mg was found to be useful in all common types of insomnia in which it was studied. Of drugs studied in a sleep laboratory,[1] Dalmane 30 mg was the only one that consistently reduced sleep induction time and maintained sleep nightly for 14 consecutive nights of use.

Confirmed clinically

Fifty-three controlled studies using a paired-night, double-blind crossover design have evaluated Dalmane clinically. In the majority of these, Dalmane (flurazepam HCl) significantly reduced sleep induction time and increased sleep duration. Dalmane and a placebo were alternated on successive nights in 2010 insomniacs, 1706 of whom were studied for a single night-pair, and the remainder for as many as fifteen paired-nights. A patient preference for Dalmane was apparent in the paired-night studies.

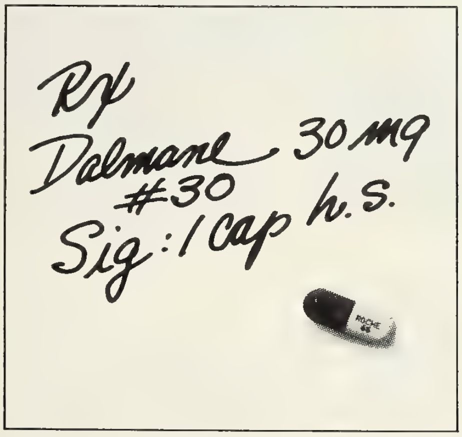
Dalmane was also preferred to certain hypnotics in two separate preference studies. In each of two double-blind studies, Dalmane 30 mg retained effectiveness for the total period of seven consecutive treatment nights, according to subjective/objective evaluations.

In summary, Dalmane is useful in all types of insomnia characterized by difficulty in falling asleep, frequent nocturnal awakenings and/or early morning awakening. It can be used effectively in patients with recurring insomnia or poor sleeping habits, and in acute or chronic medical situations requiring restful sleep.

Dalmane (flurazepam HCl) is generally well tolerated

In most instances in which adverse effects with Dalmane were reported, they were mild, infrequent and seldom required discontinuation of the drug. Dizziness, drowsiness, lightheadedness and the like were the side effects most frequently noted, particularly in elderly or debilitated patients.[3] Instances of hepatic dysfunction, paradoxical reactions (excitement) and hypotension are rare with Dalmane, and morning hang-over is relatively infrequent. In studies to date the effectiveness of Dalmane for recommended periods of use is maintained without need to increase dosage.

References: 1. Kales, A., *et al.*: "Effectiveness of Sleep Medications: All-Night EEG Studies of Hypnotic Drugs," in Proc. 7th Internat. Cong. Electroencephal. and Clin. Neurophysiol., San Diego, Calif., Sept. 13-19, 1969. **2.** Kales, A., *et al.*: "Psychophysiological and Biochemical Changes Following Use and Withdrawal of Hypnotics," in Kales, A. (ed.): *Sleep: Physiology and Pathology,* Phila., Lippincott, 1969, p. 331. **3.** Data on file, Medical Department, Hoffmann-La Roche Inc.



Rx
Dalmane 30 mg
#30
Sig: 1 cap h.s.

For the sleep your patients need

New **Dalmane**®
(flurazepam hydrochloride)

Before prescribing, please consult Complete Product Information, a summary of which follows:

Indications: Effective in all types of insomnia characterized by difficulty in falling asleep, frequent nocturnal awakenings and/or early morning awakening; in patients with recurring insomnia or poor sleeping habits; and in acute or chronic medical situations requiring restful sleep. Since insomnia is often transient and intermittent, prolonged administration is generally not necessary or recommended.

Contraindications: Known hypersensitivity to flurazepam HCl.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. Caution against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Use in women who are or may become pregnant only when potential benefits have been weighed against possible hazards. Not recommended for use in persons under 15 years of age. Though physical and psychological dependence have not been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage.

Precautions: In elderly and debilitated, initial dosage should be limited to 15 mg to preclude oversedation, dizziness and/or ataxia. If combined with other drugs having hypnotic or CNS-depressant effects, consider potential additive effects. Employ usual precautions in patients who are severely depressed, or with latent depression or suicidal tendencies. Periodic blood counts and liver and kidney function tests are advised during repeated therapy. Observe usual precautions in presence of impaired renal or hepatic function.

Adverse Reactions: Dizziness, drowsiness, lightheadedness, staggering, ataxia and falling have occurred, particularly in elderly or debilitated patients. Severe sedation, lethargy, disorientation and coma, probably indicative of drug intolerance or overdosage, have been reported. Also reported were headache, heartburn, upset stomach, nausea, vomiting, diarrhea, constipation, GI pain, nervousness, talkativeness, apprehension, irritability, weakness, palpitations, chest pains, body and joint pains and GU complaints. There have also been rare occurrences of sweating, flushes, difficulty in focusing, blurred vision, burning eyes, faintness, hypotension, shortness of breath, pruritus, skin rash, dry mouth, bitter taste, excessive salivation, anorexia, euphoria, depression, slurred speech, confusion, restlessness, hallucinations and elevated SGOT, SGPT, total and direct bilirubins and alkaline phosphatase. Paradoxical reactions, *e.g.*, excitement, stimulation and hyperactivity, have also been reported in rare instances.

ROCHE

Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

Short-acting diuretics may create abrupt, inconvenient waves of diuresis.
Long-acting Hygroton offers a gentle flow rather than abrupt diuresis.
It's smooth acting.
In edema and hypertension.

Hygroton® chlorthalidone USP

Makes water, not waves.

You know diuretics medically.

But have you met them socially?
LADIES

Electrolyte imbalance may occur when using diuretics. Hygroton is contraindicated in severe renal or hepatic diseases and, of course, if it causes hypersensitivity. Carefully supervise those who may be receiving other antihypertensives.

Hygroton® chlorthalidone USP *Indications:* Hypertension and many types of edema involving retention of salt and water. *Contraindications:* Hypersensitivity and most cases of severe renal or hepatic diseases. *Warnings:* With the administration of enteric-coated potassium supplements, which should be used only when adequate dietary supplementation is not practical, the possibility of small-bowel lesions (obstruction, hemorrhage, and perforation) should be kept in mind. Surgery for these lesions has been required frequently and deaths have occurred. Discontinue enteric-coated potassium supplements immediately if abdominal pain, distention, nausea, vomiting, or gastrointestinal bleeding occur. Use with caution in pregnant women and nursing mothers since the drug crosses the placental barrier and appears in cord blood and since thiazides appear in breast milk. The drug may result in fetal or neonatal jaundice, thrombocytopenia, and possibly other adverse reactions which have occurred in the adult. When used in women of childbearing age, balance benefits of drug against possible hazards to fetus. *Precautions:* Antihypertensive therapy with this drug should always be initiated cautiously in postsympathectomy patients and in patients receiving ganglionic blocking agents, other potent antihypertensive drugs or curare. Reduce dosage of concomitant antihypertensive agents by at least one-half. Because of the possibility of progression of renal damage, periodic determination of the BUN is indicated. Discontinue if the BUN rises or liver dysfunction is aggravated. Hepatic coma may be precipitated. Electrolyte imbalance, sodium and/or potassium depletion may occur. If potassium depletion should occur during therapy, the drug should be discontinued and potassium supplements given, provided the patient does not have marked oliguria. Take special care in cirrhosis or severe ischemic heart disease and in patients receiving corticosteroids, ACTH, or digitalis. Salt restriction is not recommended. *Adverse Reactions:* Nausea, gastric irritation, vomiting, anorexia, constipation and cramping, dizziness, weakness, restlessness, hyperglycemia, glycosuria, hyperuricemia, headache, muscle cramps, orthostatic hypotension, which may be potentiated when chlorthalidone is combined with barbiturates, narcotics or alcohol, aplastic anemia, leukopenia, thrombocytopenia, agranulocytosis, impotence, dysuria, transient myopia, skin rashes, urticaria, purpura, necrotizing angiitis, acute gout, and pancreatitis when epigastric pain or unexplained G.I. symptoms develop after prolonged administration. Other reactions reported with this class of compounds include: jaundice, xanthopsia, paresthesia, and photosensitization. *Average Dosage:* 50 or 100 mg. with breakfast daily or 100 mg. every other day. *How Supplied:* White, single-scored tablets of 100 mg. and aqua tablets of 50 mg., in bottles of 100 and 1000. (B)46-230-G *For full details, please see the complete prescribing information.*

GEIGY Pharmaceuticals, Division of CIBA-GEIGY Corporation, Ardsley, New York 10502

HY-7764-9

Michigan Medicine

In This Issue

SCIENTIFIC ARTICLES

397 The Michigan physician and continuing education: Looking to the future; John N. Kotre, PhD; Floyd C. Mann, PhD; Neal Vanselow, MD
411 Sickle cell disease: A molecular approach to pathogenesis, diagnosis and treatment; Robert M. Nalbandian, MD; T. N. Evans, MD
417 Gastric mucosal hemorrhage following sepsis and trauma; Fredrick Rector, MD

SPECIAL ARTICLES

403 The law of malpractice in Michigan; Lawrence S. Charfoos, LLB; Paul A. Gruber, LLB; Fredrick Weissman, MD
419 Doctor Norman Clarke's fabulous collection of Michigan history; Peter A. Hoheisel
460 13 steps to avoid malpractice suit
464 Michigan teachers seeking standards comparable to other professions; Melvin Leasure
476 AMA Medicredit Proposal

OTHER FEATURES

394 President's page
395 MSMS leadership
402 Perinatal tips
410 Drug therapy problems
418 Michigan authors
427 Viewpoints
440 Michigan mediscene
442 Council minutes
445 About doctors
447 Your opinion please
462 New members
471 MSMS news
472 Ancillary
477 Mailbag
480 County societies
490 Monthly surveillance report
491 In memoriam
495 Medicolegal
499 Photo pages
503 Breaking news

MICHIGAN MEDICINE is the official organ of the Michigan State Medical Society, published under the direction of the Publication Committee. Published Semi-Monthly, Trimonthly in January and December; 26 issues, by the Michigan State Medical Society as its official journal. Second class postage paid at East Lansing, Mich. and at additional mailing offices. Yearly subscription rate, $9.00; single copies, 80 cents. Additional postage: Canada, $1.00 per year; Pan-American Union, $2.50 per year; Foreign, $2.50 per year. Printed in USA. All communications relative to manuscripts, advertising, news, exchanges, etc., should be addressed to Judith Marr, Michigan State Medical Society, 120 West Saginaw Street, East Lansing, Michigan 48823. Phone Area Code 517, 337-1351. © 1971 Michigan State Medical Society.

SCIENTIFIC EDITOR
John W. Moses, MD

EXECUTIVE EDITOR
Herbert A. Auer

MANAGING EDITOR
Judith Marr

ASSOCIATE SCIENTIFIC EDITORS

Jason Bodzin, MD
Detroit, House Staff
Frederick J. Cady, Jr., MD
Saginaw, Surgery
Robert M. Daugherty, MD
East Lansing, Basic Science
Harold E. DePree, MD
Kalamazoo, Medicine
Dean C. Elliott, MD
Petoskey, Otolaryngology
Tommy N. Evans, MD
Detroit, Obst.-Gyn.
E. Richard Harrell, MD
Ann Arbor, Dermatology
Dorin L. Hinerman, MD
Ann Arbor, Pathology
Samuel D. Jacobson, MD
Detroit, Medicine
Benjamin Jeffries, MD
Detroit, Psychiatry
Raymond S. Kurtzman, MD
Detroit, Radiology
A. Martin Lerner, MD
Detroit, Medicine
John C. Peirce, MD
Grand Rapids, Medicine
Frank H. Power, MD
Traverse City, Surgery
J. G. Turcotte, MD
Ann Arbor, Surgery
Alexander J. Walt, MD
Detroit, Surgery
Park W. Willis, III, MD
Ann Arbor, Medicine
Richard E. Wunsch, MD
Traverse City, Medicine

PUBLICATION COMMITTEE

Robert M. Leitch, MD
Battle Creek
Chairman

Donato F. Sarapo, MD
Adrian

Edward J. Tallant, MD
Detroit

The artwork for this month's cover was created by Paul Brown, a designer employed with Information Services at Michigan State University. He attended Kendall School of Design in Grand Rapids.

President's Page

H. H. Hiscock, M.D.
MSMS President

Medicine moves forward peer review

Michigan residents should know that the Michigan State Medical Society is continuously improving its professional standards peer review procedures.

Michigan physicians, properly organized and with a proper mandate, are capable of conducting an ongoing effective review program which will eliminate such of the present criticism of the profession. Physicians are honorable men in an honorable profession willing to undertake necessary and broad responsibility for overseeing professional functions.

Emphasis on local peer review is necessary because the practice of medicine does vary, within reasonable limits, from area to area.

Local review assures greater familiarity with the physicians involved and ready access to necessary data. Priority is being given to arrangements by local medical societies to undertake comprehensive professional standards review. County medical societies and MSMS have established machinery to have physicians, as a group, evaluate physicians and the services they provide and order as individuals. The review committees work to determine that only medically-necessary services are provided by physicians, hospitals, nursing homes and pharmacies, and that these services meet proper professional standards.

Peer Review must remain a function of the medical profession with working county medical society committees as the foundation. Either the physician or the third-party carrier has the opportunity to appeal decisions to the regional MSMS utilization review committees; and then either may appeal to the MSMS Utilization Review and Health Insurance Problems Committee.

As we gain experience, the medical peer review mechanism will review individual charges and services, wherever performed; review hospital and skilled nursing home admissions; review the length of stays in hospitals and skilled nursing homes; and review the need for professional services provided in hospitals.

We believe the review process can have nothing but a salutary effect on the providers of services, cutting down on any occasional unintentional abuses that might otherwise occur.

The MSMS Council has accepted the following AMA definition of "peer review" to guide us in this procedure:

"Peer review is a review of physician's services by his colleagues, embracing evaluation of the quality of care provided; the frequency, volume and relationship of services ordered to the pertinent diagnosis, and the propriety of the charges submitted for the professional services rendered."

The cooperation of every MSMS member—and every doctor of medicine in Michigan—is solicited and anticipated.

MSMS Leadership

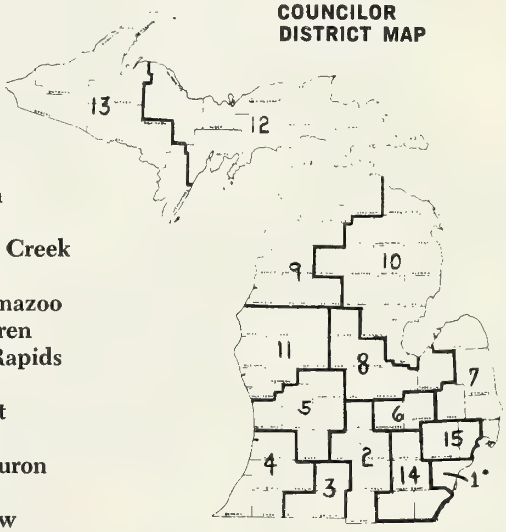
PRESIDENT: Harold H. Hiscock, MD, Flint
PRESIDENT-ELECT: Sidney Adler, MD, Detroit
SECRETARY: Kenneth H. Johnson, MD, Lansing
ASST. SECRETARY: Brooker L. Masters, MD, Fremont
TREASURER: John R. Ylvisaker, MD, Pontiac
ASST. TREASURER: C. Allen Payne, MD, Grand Rapids
SPEAKER: Vernon V. Bass, MD, Saginaw
VICE-SPEAKER: James D. Fryfogle, MD, Detroit
PAST PRESIDENT: Robert J. Mason, MD, Birmingham

AMA DELEGATES
Otto K. Engelke, MD, Ann Arbor
John R. Heidenreich, MD, Daggett
Luther R. Leader, MD, Royal Oak
Robert E. Rice, MD, Greenville
John J. Coury, MD, Port Huron
George W. Slagle, MD, Battle Creek
Donald N. Sweeny, Jr., MD, Detroit (Chairman)
Joseph A. Witter, MD, Rochester

COUNCIL CHAIRMAN: Ross V. Taylor, MD, Jackson
VICE-CHAIRMAN: Brooker L. Masters, MD, Fremont
DIRECTOR: Warren F. Tryloff, East Lansing
GENERAL COUNSEL: Lester P. Dodd, Detroit
LEGAL COUNSEL: A. Stewart Kerr, Detroit
SCIENTIFIC EDITOR: John W. Moses, MD, Detroit
ECON. CONSULTANT: Clyde T. Hardwick, Houghton
HISTORIAN: Wm. J. Stapleton, Jr., MD, Detroit
ASST. HISTORIAN: Wm. M. LeFevre, MD, Muskegon

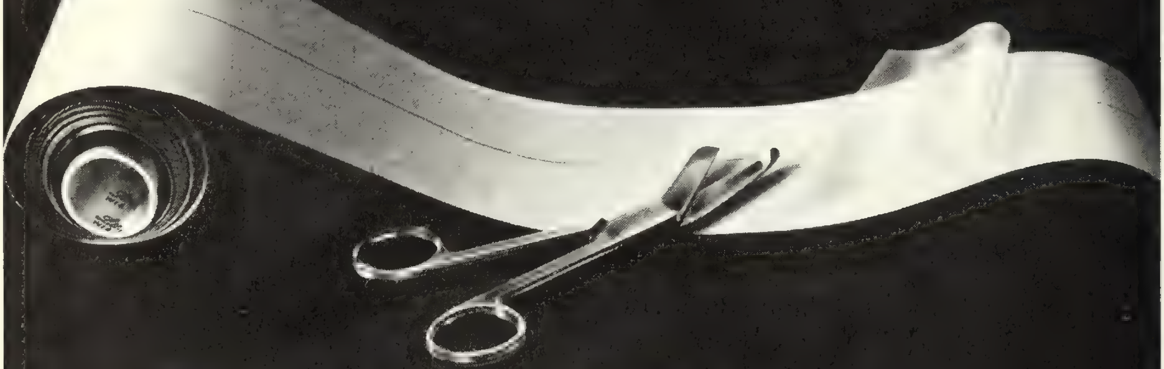
ALTERNATES
John W. Moses, MD, Detroit
Paul T. Lahti, MD, Royal Oak
Harold A. Furlong, MD, Pontiac
Bradley M. Harris, MD, Ypsilanti
James C. Danforth, Jr., MD, Detroit
Marjorie Peebles Meyers, MD, Detroit
Robert C. Prophater, MD, Bay City
Vernon V. Bass, MD, Saginaw

COUNCILOR DISTRICT MAP



First District Councilors: (Wayne County)
Edward J. Tallant, MD, Detroit
Ralph R. Cooper, MD, Detroit
Frank G. Bicknell, MD, Detroit
Milton R. Weed, MD, Grosse Pointe Park
Brock E. Brush, MD, Detroit
Second District Councilor: Ross V. Taylor, MD, Jackson
Counties: Clinton, Eaton, Hillsdale, Ingham, Jackson
Third District Councilor: Robert M. Leitch, MD, Battle Creek
Counties: Branch, Calhoun, St. Joseph
Fourth District Councilor: W. Kaye Locklin, MD, Kalamazoo
Counties: Allegan, Berrien, Cass, Kalamazoo, Van Buren
Fifth District Councilor: Noyes L. Avery, MD, Grand Rapids
Counties: Barry, Ionia-Montcalm, Kent, Ottawa
Sixth District Councilor: Ernest P. Griffin, Jr., MD, Flint
Counties: Genesee, Shiawassee
Seventh District Councilor: John J. Coury, MD, Port Huron
Counties: Huron, Sanilac, Lapeer, St. Clair
Eighth District Councilor: A. Carl Stander, MD, Saginaw
Counties: Gratiot-Isabella-Clare, Midland, Saginaw, Tuscola
Ninth District Councilor: Adam C. McClay, MD, Traverse City
Counties: Grand Traverse-Leelanau-Benzie, Manistee, Northern Michigan (Antrim, Charlevoix, Cheboygan and Emmet combined), Wexford-Missaukee
Tenth District Councilor: Robert C. Prophater, MD, Bay City
Counties: Alpena-Alcona-Presque Isle, Bay-Arenac-Iosco, North Central Counties, (Otsego, Montmorency, Crawford, Oscoda, Roscommon, Ogemaw, Gladwin and Kalkaska, combined)
Eleventh District Councilor: Brooker L. Masters, MD, Fremont
Counties: Mason, Mecosta-Osceola-Lake, Muskegon, Newaygo, Oceana
Twelfth District Councilor: William A. LeMire, Sr., MD, Escanaba
Counties: Chippewa-Mackinac, Delta-Schoolcraft, Luce, Marquette-Alger
Thirteenth District Councilor: Donald T. Anderson, MD, Wakefield
Counties: Dickinson-Iron, Gogebic, Houghton-Baraga-Keweenaw, Menominee, Ontonagon
Fourteenth District Councilor: Donato F. Sarapo, MD, Adrian
Counties: Lenawee, Livingston, Monroe, Washtenaw
Fifteenth District Councilor: Sydney Scher, MD, Mount Clemens
Counties: Macomb, Oakland

Now
available for your
prescribing
needs



Cordran® Tape
Flurandrenolide Tape (4 mcg. per sq. cm.)

Additional information available upon request · Eli Lilly and Company, Indianapolis, Indiana 46206

Lilly

The Michigan physician and continuing education:
Looking to the future

(Seventh in a Series)

By John N. Kotre, PhD
Floyd C. Mann, PhD
Neal Vanselow, MD
Ann Arbor

This seventh article on the Michigan physician and his attitudes toward continuing education presents findings about ways by which the flow of medical information throughout the state might be improved. Data will be reported about what physicians felt to be the major obstacles to engaging in formal education and what their reactions were to suggested educational innovations.

Constraints against engaging in formal education

At one point in the questionnaire an attempt was made to ascertain what some of the hindrances to formal continuing education were. Three different kinds of reasons for failure to attend conferences were explored. The first was related to the constraints of practice: either the press of time was too great or it was difficult to obtain a physician to cover one's practice. A second concerned financial constraints: the cost of tuition and travel or the loss of income from practice was too great. The third class of reasons derived from the feeling that little of value was offered: either nothing was available in the physician's immediate locale or what was available was not so unique that it could not be obtained some other way. Physicians were requested to indicate the extent to which each reason was applicable in their own case. The proportion of each major group which said each reason was applicable to a great or very great extent is shown in **Table 1**.

Just over half (51 percent) of the medical doctors said the reason "my schedule or patient load leaves insufficient time" was applicable to them to a great or very great extent. Forty-three percent thought that time conflicts stemming from their professional schedule or patient load were as much of a hindrance. Thirty percent experienced comparable difficulty from their desire to spend what free time they had with their family, and 22 percent from problems in obtaining a physician to cover for them in their absence. The major source of difficulty, then, was constraints from practice, and more specifically, the press of time.

What was offered at conferences was seen less often as a reason for not attending. Just over a fifth of the medical doctors felt that subject matter presented at courses could be obtained more easily in other ways, and even fewer felt that little was available in their geographic area, or that opportunities were available but previous experience had been disappointing.

Least applicable as reasons preventing attendance at formal educational activities were financial difficulties. Only six percent of the medical doctors agreed that the cost of tuition and travel or the loss of income from their practice hampered their attendance at such activities.

Significantly more doctors of osteopathy than medical doctors found each of the four reasons categorized "practice constraints" applicable in their own case.* Fewer osteopaths felt that subject matter presented at courses could be obtained more easily in other ways, but more said they experienced the loss of income from their practice as a constraint.

The replies of the criterion physicians to these queries are instructive. Significantly more doctors' doctors and informal/formal consultants than medical doctors experienced difficulty from *lack of time*. Sixty-five percent of the doctors' doctors and 64 percent of the informal/formal consultants said that "my schedule or patient load leaves insufficient time" was applicable to a great or very great extent, and 39 and 38 percent felt they did not have enough time to spend with their family. Significantly fewer criterion physicians than medical doctors, however, experienced difficulty from *conflicts* involving their time or their practice. Only

---

Doctor Kotre and Doctor Mann are with the Center for Research on Utilization of Scientific Knowledge, and Doctor Vanselow is with the Department of Postgraduate Medicine, all at the University of Michigan.

*Fifty-six percent of the osteopaths, compared with 52 percent of the medical doctors, were solo practitioners.[1]

Scientific Papers

TABLE I

21. Listed below are some of the reasons frequently given by physicians for not engaging in as much formal continuing medical education as they might like. For each reason, indicate how applicable it is to you.

		PERCENT saying the reason is applicable to A GREAT or VERY GREAT EXTENT:			
		Medical Doctors	Doctors of Osteopathy	Doctors' Doctors	Informal/formal Consultants
PRACTICE CONSTRAINTS	(a) My schedule or patient load leaves insufficient time	51	61**	65**	64**
	(b) Opportunities are available but occur at times which conflict with my professional schedule or patient load	43	56**	40*	34**
	(i) My practice leaves me with too little time to spend with my family; therefore, I try to spend most of my free time with them	30	40**	39**	38**
	(h) My attendance at courses is severly hampered because it is difficult to get a physician to cover for me in my absence	22	34**	12**	15**
LITTLE OF VALUE AVAILABLE	(g) Subject matter presented at postgraduate courses can be obtained more easily in other ways such as reading, etc.	21	16**	17	19
	(d) Very little is available in my geographic area	11	15	14	17**
	(c) Opportunities are available, and in my field(s) of interest, but previous experience has been disappointing	9	9	7	7
FINANCIAL CONSTRAINTS	(f) Monetary reasons such as tuition and cost of travel prevent my participation	6	4	2**	1**
	(e) Loss of income from my practice prevents my participation	6	12**	6	6
	Average, No response***	7	5	2	2
	N=	919	183	96	89

*The mean of this distribution is significantly different from the mean of the medical doctors' distribution at the .05 level (t-test, two-tailed). On occasion this significant mean difference is not reflected in the figures above, which present only the percentage of respondents in the upper two categories of the distribution.

**The mean is significantly different at the .01 level (t-test, two-tailed).

***The no response rate averaged for the nine items.

40 and 34 percent reported that time conflicts stemming from their professional schedule or patient load were a great or very great hindrance; only 12 and 15 percent reported great or very great difficulty in getting a physician to cover for them.** Fewer criterion physicians than medical doctors thought of the cost of tuition and travel as a hindrance, and more consultants said that little was available in their geographic area.

Within the general sample of medical doctors three kinds of practice constraints were found to be significantly associated with respondents' type of practice (Chart 1). Insufficient time was more of a problem for those in solo, two-man, and profit-sharing group practice than it was for others. Doctors in both types of group practice complained more than others that too little time was available for their families. Considerably more solo practitioners than others said they had difficulty obtaining a physician to cover their practice. It was also found that doctors in general practice and doctors affiliated with small hospitals—both characteristics of the solo practitioner—reported more difficulty finding a physician to cover for them.

In sum, the major hindrances to engaging in continuing education were not the quality of what was offered or the cost incurred in attending programs. The chief obstacles were the lack of time, schedule conflicts, and difficulties in obtaining covering physicians. Any new educational technique must address itself to these problems if it is to be successful.

Receptiveness to potential innovations

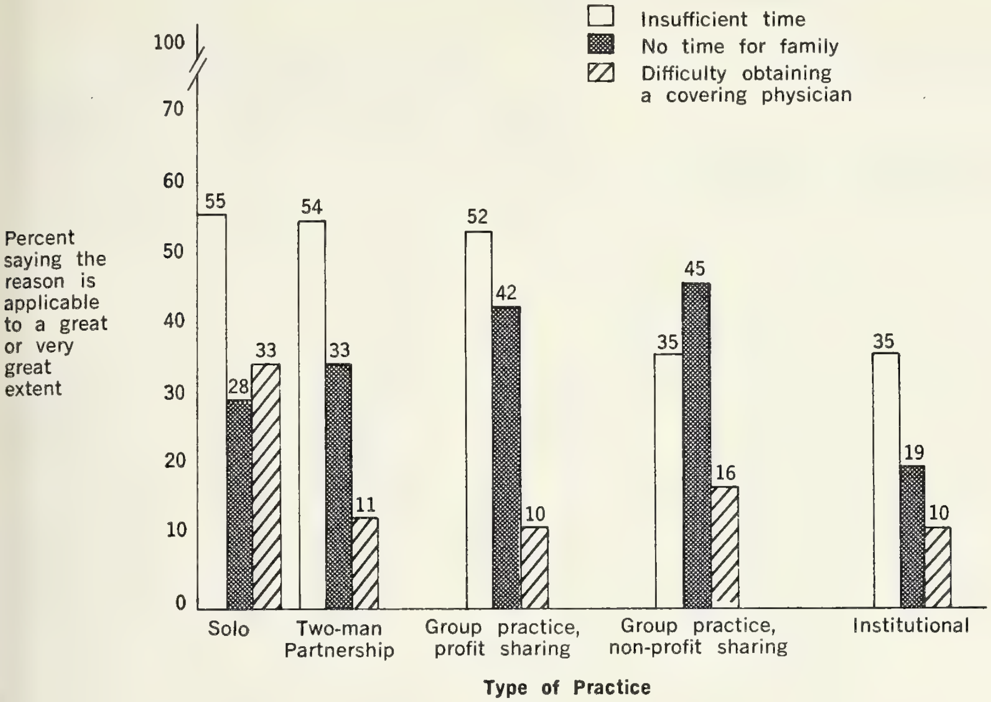
There were two places near the end of the questionnaire where physicians were invited to express their interest in potential innovations in continuing education techniques. The first occurred in the context of a larger question in which respondents were asked to indicate their agreement with a variety of statements. Four of these statements suggested innovations in continuing education: an advisory consultant available in the hospital, an inventory of diagnostic skills, a computerized information service, and a "hot line." Respondents' ex-

---

**Both criterion groups reported working longer hours than the general sample of medical doctors. Fewer criterion doctors (43 and 44 percent) than medical doctors (52 percent) were in solo practice.[1]

Chart I

Perception of Practice Constraints by Type of Practice for Medical Doctors



tent of support for each of these suggestions is shown in **Table 2.**

Fifty-seven percent of the general sample of medical doctors said they would be willing to complete an inventory of their diagnostic skills to aid in establishing a program of continuing education at their hospital. Thirty-nine percent agreed that they would like a computerized instantaneous medical information service, 38 percent that they would like a "hot line" for instantaneous consultation, and 37 percent that they would like a prestigous advisory consultant available on a regular basis at their hospital. Doctors of osteopathy, doctors' doctors, and consultants—groups found to be more eager for professional development[6]—were, with one exception (doctors' doctors regarding advisory consultants), more receptive to all these suggestions. In most cases, the differences between

TABLE 2

Agreement with Four Suggestions

34. Please express your agreement or disagreement with the following statements.

	PERCENT who MILDLY or STRONGLY AGREE			
	Medical Doctors	Doctors of Osteopathy	Doctors' Doctors	Informal/formal Consultants
(b) I would be willing to complete an inventory of my diagnostic skills to aid in establishing a program of continuing education at my hospital	57	65**	63	65**
(e) I would like to have a computerized instantaneous medical information service for aid in diagnosis and treatment available in my hospital	39	55**	55**	61**
(f) I would like to have a "hot line" (perhaps via toll-free telephone or closed circuit TV) available for instantaneous consultations between my office or hospital and a large medical center	38	58**	47**	52**
(a) I would like to have an advisory consultant with a certain prestige in the field of surgery or medicine available at my hospital for a day on a regular or biweekly basis	37	43**	32**	44
Average, No Response***	11	11	9	8
N=	919	183	96	89

**The mean of this distribution is significantly different from the mean of the medical doctors' distribution at the .01 level (t-test, two-tailed). On occasion, this significant mean difference is not reflected in the figures above, which present only the percentage of respondents in the upper two catgories of the distribution.

***The no response rate averaged for the four items.

TABLE 3

Interest in Eight Proposals

35. To what extent are you interested in the following types of continuing education programs?

	PERCENT responding TO A GREAT or VERY GREAT EXTENT			
	Medical Doctors	Doctors of Osteopathy	Doctors' Doctors	Informal/formal Consultants
(a) A comprehensive program designed to cover many aspects of medicine or of your specialty in a systematic manner over a period of several days and repeated at regular intervals (e.g., a yearly clinical review)	55	61**	65**	60
(g) A well-developed program in your hospital whereby regular staff and departmental meetings have good educational programs on needs identified by the physicians	53	56**	65**	69**
(e) A special program in your local hospital with a topic presented by a recognized authority, patients presented by local physicians, discussions of diagnosis and treatment, followed by a return visit by the authority about a month later	39	41**	51**	47**
(b) Form your own program through selecting your own topics from the postgraduate courses now offered	38	42*	49**	45**
(f) A tailor-made program for the individual physician on any topic of his choice, consisting of weekend courses, teaching tapes, reprints, home study materials, etc.	25	37**	29	32*
(h) A system of two-way radio or television conferences between your hospital staff and a large medical center	19	34**	30**	32**
(c) A clinical training or residency-like program lasting **several weeks**	13	18**	15	14*
(d) A residency-like program in a particular specialty or subspecialty lasting **several months**	7	9**	2**	3*
Average, No Response***	11	11	9	8
N=	919	183	96	89

*The mean of this distribution is significantly different from the mean of the medical doctors' distributions at the .05 level (t-test, two-tailed). On occasion, this significant mean difference is not reflected in the figures above, which present only the percentage of respondents in the upper two categories of the distribution.

**The mean is significantly different at the .01 level (t-test, two-tailed).

***The no response rate averaged for the eight items.

them and the general sample were statistically significant.

Immediately after indicating their agreement or disagreement with the statements just discussed, physicians were presented with a list of eight proposals for continuing education and asked to express the extent of their interest in each. **Table 3** shows what these proposals were and how interested respondents were in each of them.

Fifty-five percent of the general sample said they were interested to a great or very great extent in a comprehensive program covering many aspects of medicine or of their specialty lasting several days, and repeated at regular intervals (e.g., a yearly clinical review). About the same proportion was interested to the same degree in the suggestion that regular staff and departmental meetings in their hospital have educational programs on needs identified by physicians.

A moderate amount of interest was expressed by medical doctors in a special program in their hospital with a topic presented by a recognized authority, patients presented by local physicians, discussions of diagnosis and treatment, followed by a return visit by the authority a month later. About the same interest was shown toward physicians' forming their own program through selecting topics from currently offered postgraduate courses.

Less interest was expressed by medical doctors in each of the following: a tailor-made program on any topic of the physician's choice, consisting of weekend courses, teaching tapes, reprints, home study materials, etc.; a system of two-way radio or television conferences between their hospital staff and a large medical center; a clinical training or residency-like program lasting *several weeks;* and a residency-like program in a particular specialty or subspecialty lasting *several months.* It is clear that medical doctors were not positive toward any suggestions involving more than several days of their time. It is also noteworthy that the one suggestion involving an innovation in hardware (two-way radio or television conferences) did not receive much support.

Once again, osteopathic physicians, doctors' doctors, and consultants expressed more interest than the general sample in these eight activities. The differences between them and the general sample were statistically significant in most instances. The one exception to this generalization concerns residency-like programs of several months, a proposal to which both criterion groups gave less support.

Among medical doctors in the general sample, few background characteristics were associated with receptiveness to the suggestions listed in **Tables 2 and 3.** Internists were the most positive of the specialty groups toward the idea of forming their own program from present postgraduate courses. Doctors at larger hospitals were more willing to complete an inventory of skills, while those at the smallest hospitals were most receptive to the concept of an advisory consultant available at their hospital. Younger doctors were more positive toward most suggestions than older doctors. Those from the upper peninsula were the most interested in a "hot line," two-way radio or television, and tailor-made programs for individual physicians. Doctors from the southeast were more receptive than others to the idea of using regular hospital meetings for educational programs.

Although the questions in **Tables 2 and 3** were not written in such a way that major themes could be detected from the replies of physicians, several conclusions seemed warranted: (1) Physicians were, in general, favorably disposed to a number of new techniques. Osteopaths and criterion doctors—groups particularly high on measures of motivation[6]—were the most receptive to potential innovations. (2) Several techniques which have received considerable attention from medical educators—TV or radio conferences and clinical training programs—were not received too favorably. Those who believe in these techniques cannot assume there is a large audience waiting to take advantage of them. Practicing physicians will first have to be convinced of their value.

Summary

Data has been presented regarding (1) the constraints which physicians say prevent attendance at continuing education programs and (2) the educational innovations to which they may be receptive. It was found that the lack of time and the difficulty of obtaining a covering physician were more serious impediments than the lack of relevant programs or the cost of attending them. Solo practitioners reported considerably more difficulty than others in finding a physician to cover their practice. Physicians were favorably disposed toward a number of potential educational innovations, osteopaths and criterion doctors being the most receptive. Proposals for TV or radio conferences and lengthy training programs, however, did not receive much support.

References

1. Mann, F., Kotre, J., Reilly, A., and Vanselow, N. The Michigan Physician and His Continuing Education, *Michigan Medicine,* 1970, *69,* 21, pp. 981-990.
2. Mann, F., Kotre, J., Reilly, A., and Vanselow, N. The Michigan Physician: His Work Needs and Opportunities, *Michigan Medicine,* 1970, *69,* 23, pp. 1063-1069.
3. Kotre, J., Mann, F., Morris, W., and Vanselow, N. The Michigan Physician's Use and Evaluation of the Medical Journal, *Michigan Medicine,* 1971, *70,* 1, pp. 11-16.
4. Kotre, J., Mann, F., and Vanselow, N. The Michigan Physician: His Use and Evaluation of the Professional Meeting and the Postgraduate Course, *Michigan Medicine,* 1971, *70,* 4, pp. 111-117.
5. Kotre, J., Mann, F., and Vanselow, N. The Michigan Physician: His Education Through Face to Face Contacts and Technical Media, *Michigan Medicine,* 1971, *70,* 6, pp. 193-198.
6. Mann, F., Kotre, J., and Morris, W. The Michigan Physician: Perceptions of Competence, Worries, and Obsolescence, *Michigan Medicine,* 1971, *70.*

Perinatal Tips

By Paul M. Zavell, MD
Detroit

The following case from the files of the Wayne County Medical Society Perinatal Mortality Committee is presented as an aid in continuing education.

Maternal

This was the third pregnancy of a Gravida V, Para II, 33 y B+ white mother. A C-Section was done in the 39th week (repeat C-Section). We have no further details about the mother.

Fetal

A six-pound, 10 ounce white male infant was born at 10:38 a.m. on Oct. 14, 1968. Soon after birth grunting and respiratory distress began. By noon the pediatrician saw the infant and felt early respiratory distress was beginning. While inserting the umbilical vein catheter the patient had a convulsion and both the heartbeat and respiration stopped. As the catheter was withdrawn the convulsion stopped. Quickly the heartbeat and respiration began. Soon thereafter the respirations increased to 80-100/minute. Another attempt to catherize the umbilical vein was successful and the patient was given classical Usher treatm with frequent Blood p CO_2 and ph's while ceiving sodium bicarbonate in I.V. fluid in isolette in oxygen and high humidity. I.V. pe cillin and I.M. Kantrex were also given. For next three days the infant had a very difficult ti with rapid respirations, cyanosis, etc. The he rate gradually increased in rate to 160-200 minute so that I.M. Cedilanid was begun. O medication and fluid were impossible to give this time. With digitalization the heart rate dr ped to 120-140 per minute. Twelve hours la vomiting began and in a few hours it was evid by abdominal distention, no bowel sounds a X-ray findings that an Ileus was present. Digit zation was stopped, KCl was added to I.V. a shortly thereafter bowel sounds returned a vomiting ceased. No EKG was done but elect lytes drawn before giving KCl showed them be normal except for low potassium. Twelve ho later the infant began to take glucose water mouth but soon thereafter generalized jerk started. Blood studies revealed low calcium a elevated phosphate. He was given some calci very, very slowly by I.V. and the jerking so stopped. Thereafter extra calcium by mouth the formula was satisfactory. His course thereaf was uneventful with rapid cessation of I.V. flu oxygen, isolette, etc. At one-year of age he sho minimal paralysis of right arm and weakness right foot but he is receiving physical and ort pedic therapy. Otherwise he appears alert in ev way.

Perinatal Committee Comments

1. This case is presented to show that desp multiple problems (respiratory distress, Iatroge Ileus due to low potassium and digitalization, a tetany of the newborn), careful and thorou pediatric care can result in a normal (or n normal) infant. Studies to establish appropri diagnoses with immediate therapy can make t difference between success and failure.

2. We can only theorize that the convulsi cessation of respirations, and heart beat w due to the catheter irritating the pace-maker a of the heart.

The author is chairman, Neo-Natal and Hospital Care Committee, Michigan Chapter, A.A.P., and chairman, Perinatal Mortality Study Committee, Wayne County Medical Society.

The law of malpractice *in Michigan*

By Lawrence S. Charfoos, LLB
Paul A. Gruber, LLB
Detroit
Fredrick Weissman, MD, FACS
Southfield

Introduction

The fact that malpractice suits are a cause of great concern to the medical profession needs no documentation. Physicians are constantly apprised of the problem, by the AMA, their regional societies, medical journals, newsletters, and rising insurance premiums. Now the Federal government has entered the area as well.[1]

As has long been suspected by both physicians and attorneys concerned with the subject, the Federal Report confirms one certainty—that there is a *dearth* of reliable information as to the scope of the malpractice problem. No one has measured the extent of malpractice litigation or its effect on the medical community, the public and the insurance industry. Since no one has effectively defined the problem, obviously, a solution is even further away.[2]

A survey of recent articles in medical publications and interviews with numerous physicians indicate limited comprehension by physicians of what constitutes malpractice and its related legal problems. The purpose of this article is to offer an outline of the legal aspects of medical malpractice as defined by Michigan law.

Malpractice Defined

A basic legal definition of malpractice is:

> "The failure of the physician or surgeon to exercise that degree of reasonable and ordinary care, diligence and skill in the diagnosis and treatment of his patient that is ordinarily possessed and exercised by physicians engaged in the same line of practice and during the same period of time."[3]

Further, the physician's failure to use reasonable care must proximately result in damage to his patient.

In talking to the juries a lawyer might say that malpractice is to physicians what running a red light is to a motorist. It is something that should not happen.

A failure to use reasonable care can be an act of commission (severing the recurrent laryngeal nerve in a thyroidectomy), an act of omission (failing to obtain a history of known penicillin allergy prior to injection), or non-feasance (failing to order hospitalization of an auto accident victim with obvious free air under the diaphragm on X-ray). If such a mistake results in injury to the patient a legal cause of action could well exist.

Starting the Case and Trial

When a physician is sued for malpractice in Michigan the case is generally started in the circuit court in the county where the doctor resides or practices. It is in the circuit court that the trial will take place if the case cannot be settled. Either side may ask for a jury. If neither side does, the case will be tried by a judge. It is the duty of the jury to determine the facts as they find them. (The judge does this if there is no jury.) The judge rules on questions of evidence and instructs the jury as to the applicable law. The jury must find either for the plaintiff or the defendant. If it finds for the plaintiff it determines the amount of his damages. Insurance company lawyers seem to prefer having juries, as opposed to a single judge, decide the case.

Attorneys Charfoos and Gruber are Detroit plaintiff attorneys. Doctor Weissman is active in professional medical insurance committee work.

"In this state, clear and decisive proof of real negligence will have to be offered before a doctor will be held liable through the appellate procedure."

The Appeal

In Michigan either party may appeal to an appellate court. It is important to understand that the fact that the jury decides against the doctor is not a basis for appeal. If the judge committed no legal error then, generally, the appeal court will let the jury verdict stand. Hence, an appeal is *limited* to questions of law. If there is an appeal the transcript of the proceedings in the trial court is typed up. Then the lawyers submit written briefs stating their legal positions.

If the appellate court finds that there was, in fact, legal error committed by the trial judge, then the lower court decision can be reversed and an order entered that the case be retried or the case be dismissed depending on the circumstances.

An opinion is published and the rules of law stated in the opinion have the effect of law and are binding upon the citizens of our State. These opinions are in effect the basis of our so-called common law.

Since 1965 Michigan has had a double layer of appellate courts. Prior to 1965 all appeals from circuit court went directly to the Michigan Supreme Court. Thus, all appellate decisions in this state before 1965 are Supreme Court decisions. In 1965 an intermediate Court of Appeals was established. Since then all appeals from the circuit courts must be made to the Court of Appeals. The decisions of the Court of Appeals under some circumstances are reviewable by the Supreme Court but in most cases the Court of Appeals makes the final decisions.

The records and rulings of the trial courts are not usually published and they have no particular legal significance beyond the parties to the particular case.

Consequently, no figures are available as to the actual number of malpractice suits filed in the trial courts, nor is the nature of the cases or their disposition published unless a case is appealed and decided.

Survey of Appellate Decisions

In Michigan our Supreme Court started handing down written decisions in about 1843.[4] Since then 384 volumes of Supreme Court decisions have been published. Each volume contains approximately 120 cases for a total of around 46,080 decisions.[5]

The Michigan Court of Appeals published its first decision in January, 1965, and to date there are 23 volumes containing nearly 3,000 decisions.

A search was made of the above listed appellate decisions to find all cases dealing with medical practitioners.[6]

A total of 105 cases were found.[7] (Cases involving hospital liability only were not included.)

Fifty-two of these cases have been decided since 1944 and 38 of those since 1960.

Of the 105 cases discovered involving medical practitioners, 47 or 45% were on appeal from plaintiff's verdicts. The other 58 or 55% were on appeal from decisions in favor of the defendants.

Of the 47 verdicts for plaintiff 27 were reversed by the appellate court. Of the 58 defendant's verdicts 24 were reversed.

Of the 105 cases decided by the appellate courts 20 plaintiff verdicts were sustained (19%), 33 defendant verdicts were sustained (31%) and the remaining 52 cases were returned to the trial court for a new trial.

Although it is difficult to read any meaningful conclusions from the above, it does not take a statistician to recognize the high degree of uncertainty in such litigation from both the defendant's and plaintiff's viewpoint. Based on appellate cases only, plaintiff has a 19% probability of winning in the trial court and being sustained on appeal. Defendant has a 31% chance of the same. The remaining cases were sent back to the trial court for re-trial and what happened to them is not known.

Medical malpractice appellate cases in Michigan are limited and remain an area relatively remote from the experience of most legal practitioners. It would appear that physicians in this state have not been over-burdened at least with cases requiring appeals. In this state clear and decisive proof of real negligence will have to be offered before a doctor will be held liable through the appellate procedure.

Michigan appellate law has consistently recognized the community attitude that physicians will be given every consideration short of a license to do wrong.

Malpractice Law in Michigan

Preliminary Consideration

This survey is based on the published appellate court decisions, primarily those of the Supreme Court.[8]

Before a patient can sue there obviously must be some relationship between him and the physician he wishes to sue. Most cases arise from the direct patient-physician relationship. However, when a patient is referred to a specialist by another physician the specialist could be liable to the patient, if he accepted the case, even if he never saw or treated the patient.

The liability could arise perhaps if the specialist failed to see the patient promptly and to render immediate treatment as required by the medical condition.

In 1964 a Flint orthopedist was required to stand trial by the Supreme Court in an unusual situation. The patient had been transferred by ambulance. When the doctor came to his room he was told by some people in the doorway whom he assumed were "relatives" that the plaintiff did not want his services, but wanted another doctor, so he left. The patient alleged he had made no such statement.

The Supreme Court said it was for the jury to decide if the doctor acted in a reasonable and prudent manner under the circumstances.

Good Samaritan

In Michigan, as in most states, physicians and nurses are protected from negligence suits by our Legislature when they render care at the scene of an emergency.[9]

There is not a single known Michigan appellate case involving an injured person suing a physician rendering aid at the accident scene, and the authors are not aware of such a case ever being successfully prosecuted in a trial court in this state.

Statute of Limitations

The law has long recognized the social purpose of limiting the period of time in which a person can sue another for an alleged civil wrong. This time period is set by the Legislature and is called the Statute of Limitations. The time period applicable to physicians is two years.[10]

The two-year period begins to run when the physician

> "discontinues treating or otherwise serving the patient in a professional or pseudo-professional capacity as to the matters out of which the claim for malpractice arose."[11]

There are a number of exceptions which will keep the two-year period from running. The principal exceptions which toll the statute are as follows:

1. If the plaintiff is under 21 years of age, insane or imprisoned at the time his claim arises, he shall have until one year after the removal of the disability.[12]
2. Any and all periods in excess of two months that the defendant is out of the United States after the claim accrues shall not be counted as part of the two years.[13]
3. "If a person who is or may be liable for any claim fraudulently conceals the existence of the claim or the identity of any person who is liable for the claim from the knowledge of the person entitled to sue on the claim. . ." the plaintiff has two years from the date he discovers "or should have discovered" the fraud.[14]

The above are the most important exceptions to the basic two-year rule.

As noted in the footnotes our current Statute of Limitations became effective as of January 1, 1963. Until that time so-called "sponge cases" and similar cases had a different statute of limitations by court decision. The statute did not start to run until the plaintiff discovered or should have discovered the wrong, e.g., the presence of a forgotten sponge.

The legislative action of 1963 would seem to change that, and so long as the physician and/or hospital staff does not "fraudulently" conceal the fact that a sponge, etc., had been inadvertently left in the surgical field, the two-year period will begin to run from the last date of treatment for the condition and apparently will not be extended beyond that period.

Result Guaranteed

Most physicians learn early in their training the admonition not to guarantee or warrant the results. Yet there are appellate cases in 1957, 1963 and 1968, where one of the issues was whether or not the physician had made an "express promise" regarding some part of the treatment.

In the first two cases the plaintiffs claimed the doctor had promised a specific treatment and then had done something else without their permission (e.g., caesarean delivery promised but not performed).

In the 1968 case the psychiatrist allegedly warranted that after treatment "plaintiff's marital relations would improve."

Such a promise if breached, could conceivably be a basis for suit.

Clearly, the area of greatest exposure is in plastic surgery, particularly elective cosmetic procedures. Any physician who feels any vulnerability in this legal area would be wise to routinely have

"Doctors are concerned that they must tell the patient every possible complication in order to constitute an informed consent. This is not the law."

the patient sign a form similar to that found in the footnote.[15]

Agency

This is an area of law that appears to be of great concern to many physicians. It deals with the type of situations that could make a doctor liable for the negligent acts of others.

Certain general rules can be stated.

1. If you are a partnership you are liable for the negligent act of any partner that arises in the course of his employment.
2. You are liable for any negligent act of any of your employees that arises in the course of their employment.
3. If you give negligent medical instructions to another medical person to carry out and he does as instructed and the patient is injured, you would be liable.
4. If you are a private physician generally you would not be liable for injuries to your patient done by the negligent acts of a hospital employee if said acts were not done under your supervision or control.

In Michigan the liability of one person for the acts of another in the surgical suite remains uncertain. The so-called "captain of the ship" doctrine has never been passed on by our appellate courts.

The theory of that doctrine as created in 1949 in Pennsylvania was that the patient had a right to look to one person to be responsible for any wrongful injury occurring during surgery because the patient was under anesthesia and not in a position to know who did what.

As a rule of thumb, Michigan decisions have held the following:

1. The chief surgeon will generally be liable for the errors of all assistants, physicians and nurses.
2. Whether he is liable for the errors of the anesthesiologist has not been decided.

Finally, there is at least one case that has held that the treating physician is not in an agency relationship with a doctor called in for consultation. So if the consultant negligently injures the patient while carrying out his examination the referring physician would not be liable.

Consent and Informed Consent

The general rules of consent are well-known to physicians:

1. No examination or surgery can be performed without the patient's consent.
2. A minor cannot give consent for surgery.
3. Surgery different than that consented to cannot be performed by a surgeon.

The exceptions to the above list arise in the areas of emergencies and the discovery of life-threatening conditions. Suffice to say that in a real emergency or where the surgeon discovers an unexpected life-threatening condition during surgery the courts are inclined to give every consideration to the physician.

The issue of whether or not consent was actually given has rarely resulted in litigation in recent years. The area of so-called "informed consent" has been the broadening field of discussion and a field that has deeply concerned physicians, because they do not understand its legal ramifications and limits. Informed consent means that the patient has to be reasonably informed as to the nature of the procedure contemplated and its possible complications. Doctors are concerned that they must tell the patient every possible complication in order to constitute an informed consent. This is not the law.

In a 1963 case our Supreme Court stated:

> "The question presented is, in substance, whether a physician and surgeon before operating should advise the patient of *all possible results.* Whether such should be done would seem to be a matter to be determined with reference to the general practice customarily followed by the medical profession. . ."

Thus, informed consent becomes a very limited doctrine. Indeed, at a recent seminar on medicine and law sponsored by Wayne State University it was agreed by all attorneys present that no plaintiff's attorney should consider handling a case where the only wrong alleged was a lack of "informed consent" and defense counsel could not remember a single case that had been won in the trial courts on that doctrine alone.

The decision of the Supreme Court means that for plaintiff to win he *must* have a doctor come into court and testify that he knows that it *is* the standard of practice for physicians to warn of the particular complication in the particular procedure.

The authors believe that the importance of informed consent is very limited but has some validity when the particular procedure creates the measurable possibility of a greater injury than the condition being tested for or treated.

Areas of largest exposure are some of the more dramatic diagnostic exams, e.g., myelogram, arteriogram, pneumoenchephalogram, etc. Also, surgery that statistically results in serious complications such as paralysis or death requires informed consent.

Standard of Care

No physician can be liable for malpractice unless he violates the medical standard of care. *The medical standard of care is set by the medical profession.* It is a composite of many things, classroom theory, clinical experience, medical publications, professional societies and hospital standards, etc. If the profession is divided as to the best manner of handling a particular medical problem, then both versions are acceptable as within the standard of care.

When a physician deviates from what responsible doctors know to be proper treatment then he has deviated from the standard of care.

A few specific examples from Michigan law may help.

In a 1964 case a general surgeon was held in violation of the medical standard of care when post-operatively he ordered an IV feeding of 1000 cc of distilled water but failed to add 5% glucose when writing the order. Hemolysis resulted.

In a 1968 case a surgeon was sued for injuring the recurrent laryngeal nerve during a thyroidectomy. The defendant physician conceded that the standard of care was that the nerve "can be avoided and should be avoided."

With rare exception no physician will be held liable for malpractice unless another physician testifies in open court that what the defendant physician is accused of doing constituted a violation of the medical standard of care.

A Bad Medical Result

Some doctors are fearful that if their treatment ends in a bad medical result that this will make them liable for malpractice. This is not true.

When the court speaks of a "bad result" it is using a legal term that means the treatment was proper but the hoped-for cure did not occur. For example, areas that lend themselves to "bad results" that do not constitute malpractice are plastic surgery, healing of fractures, open-heart surgery, etc.

Legally, a "bad result" cannot include an area of the body not under treatment. Thus a 1968 case held that a man being treated in a hospital for partial paralysis secondary to a stroke had a valid claim for damages when he suffered burns to the right side of his body.

A Matter of Judgment

The courts in Michigan favor a physician who, faced with a legitimate medical decision makes the wrong one. This is called a matter of judgment. Thus, a physician confronted with post-surgical infection who uses his professional experience to choose the type of antibiotic for immediate treatment is not liable for malpractice when the cultures later show the infection to be resistant to that antibiotic.

If an orthopedic surgeon has several legitimate alternative choices available to him in treating a severe hip condition, he is not liable for malpractice if the treatment he chooses fails to effect a cure.

Proximate Cause

This is a lawyer's term. It can be very complicated but in its simplest form it means that the malpractice claimed "caused" the damage alleged.

A classical example of the proximate cause problem is found in "failure to treat cases." Where plaintiff suffering from chest pains is not promptly seen by the emergency room physician and he dies from cardiac arrest the posed question becomes: Was the defendant physician's negligence in failing to render prompt treatment a proximate cause of plaintiff's demise?

Defendant will, of course, argue that even if he had rendered treatment plaintiff would have died. Proximate cause is the issue.

From a physician's viewpoint proximate cause can be considered a form of medical causation. Because of A did B occur? A doctor cannot be held liable for malpractice unless plaintiff shows that the defendant's negligence was a proximate cause of the alleged injury.

Expert Testimony

The subjects to be discussed hereafter are legal questions that arise if an actual trial occurs.

As noted earlier, for a physician to be held liable for malpractice, the plaintiff must offer a physician who will testify that defendant breached the standard of medical care.

"An attorney who accepts and starts a malpractice case without first getting a medical consultation does a disservice to his client and profession."

The witness so testifying is offering expert testimony. He is giving the court and the jury his opinion. Generally, only experts can give opinions in court. A licensed, practicing physician is an expert as to most medical issues.

The expert must have some basis in his professional background for his opinion. It may be from his medical schooling, training, practice or a combination thereof.

His opinion must be based on the facts shown in the particular case. He cannot assume facts that are not part of the case.

In Michigan as in most other states the defendant when asked must give his medical opinion if he has one.

Theoretically, the defendant's opinion once given, could be a basis for showing that he violated the standard of care. In practice this rarely occurs. The defendant will testify that what he did in his opinion was proper under the circumstances. It is a rare physician who once involved in litigation effectively admits his liability.

Medical Specialties

In a recent Supreme Court decision specialists are held to a standard of care measured by the practice of that specialty nationwide. The so-called community rule has been eliminated as to specialists. A specialist is charged to keep abreast with published happenings relevant to his specialty. (This decision was fully reported in the January 1971 issue of *Michigan Medicine,* page 39.)

If the defendant is a specialist, does it follow that the expert witness testifying against him must be a specialist in the same field? The court in a 1942 case answered this question in the negative. If the expert witness demonstrates to the judge any reasonable basis on which he renders his opinion, then it will be admissible, as the lawyers say, "for what it is worth."

The law holds that it is up to the jury to give such weight to the testimony of the expert as it feels proper.

Cross-Examination from Texts

You cannot be cross-examined from a textbook unless you testify that you used it as a basis for your testimony. Michigan is currently in the minority in this regard.

Thus, even if you admit that the book mentioned is an authority in the field it may not be used in cross-examination unless you further add that you based your opinion in part at least on materials in that particular book.

It is quite possible that this rule may be changed in the near future subjecting you to cross-examination from texts that you acknowledge as standard type treatises but as of the writing of this article the old rule remains in Michigan.

Evaluating a Malpractice Case

In determining whether or not there has been a violation of the standard of care by a physician, a retained attorney for plaintiff should have a definite opinion from a physician before suit is commenced.

An attorney who accepts and starts a malpractice case without first getting medical consultation does a disservice to his client and profession. In certain limited cases sufficient facts will not be available for a complete review by the consulting doctor prior to institution of suit and discovery proceedings held before trial. In such a case the consultant will be able to help formulate what should be sought during discovery to make a final determination.

The primary decision as to whether or not there is a valid claim is out of the hands of the defense attorney. Normally, he is retained through the doctor's insurance carrier after suit has been filed. Much of his investigation will be along the same lines as that of the plaintiff's attorney, i.e., to gather the facts as soon and as accurately as possible.

In most instances he will wish to meet with the defendant doctor immediately to go over the facts of the claim as stated in the complaint. He will want to review the doctor's records in detail and the entire hospital chart if hospitalization was involved. The doctor's frank opinion as to the medical questions involved is absolutely necessary in formulating the defense.

The defense lawyer will also have the facts and records reviewed by a disinterested physician, in order to obtain expert testimony for the defense. Where the case is not medically defensible the defense attorney still benefits from independent consultation because he learns the medical weaknesses of his case and, if necessary, can attempt to settle the claim out of court.

The Relative Value of Malpractice Suits in our Society

Our English-American law has long recognized the right of a citizen to seek damages from any person who wrongfully injures another. This is a matter of social policy.

No doctor likes a malpractice case whether it happens to him or a professional friend. Responsible men though may well agree that they are a necessary evil.

Malpractice cases are the only recognized external control of physicians as to the standard of medical care in the society.

It is important to note that there is a major difference between malpractice and, for example, auto negligence cases. A violation of a motoring law with resulting personal injury can cause not only a civil suit for damages, but also punishment for a crime.

A doctor guilty of reckless driving could end up in jail and also be liable for personal injury if someone is hurt.

A doctor guilty of reckless surgery need fear no criminal punishment. His only exposure beyond his professional compatriots' sanction, if any, is for civil damages.

No responsible doctor whom we have met advocates the cessation of a patient's right to claim damages for medical negligence.

A study of malpractice claims is now being undertaken under a federally sponsored grant. The study will attempt to identify the more frequently recurring medical causes of malpractice. Once identified, efforts can be made to eliminate them.

While it is true that physicians, attorneys, insurance carriers and the government take different approaches to solving the problems inherent in malpractice, no responsible party will deny that malpractice occurs.[16] Patients are injured, sometimes seriously, through negligence of the medical profession. Roughly 85% of all malpractice suits allege negligence on the part of health personnel.[17] Many of these suits are clearly justified. Even the most conscientious doctor may deviate from the required standard of care and cause injury to a patient. More disturbing is the allegation that some doctors—possibly 5% of the total—are incompetent or money hungry or so selfish and egotistical that they will not call for consultation by a specialist in a given field when the same is indicated.[18] While such charges are harsh and in the authors' opinion exaggerated as to percentages they do contain a great deal of truth.

Whether we like it or not, under our legal system an injured patient has only one recourse to obtain compensation for his injuries—a suit for malpractice. It may be that a better system for compensating patients who are negligently injured can be devised, but there has yet been no agreement on such a substitute which would be satisfactory to all interested groups.

On the other side of the coin many lawsuits are irresponsibly started against physicians based upon no more than an unfortunate medical result which was in no way due to negligence. Responsible claimants' counsel will not handle such a case since his investigation prior to taking action will have indicated that the patient has no case. Unfortunately, some attorneys' investigations appear to go little further than accepting their client's story at face value and filing suit without medical investigation or consultation. The result of such irresponsible suits is only to further aggravate the misunderstandings and ill-feelings which surround the malpractice area.

Between the extremes of obvious negligence and obviously irresponsible litigation are injuries to patients which involve medical and surgical procedures in which the question of actual negligence is the subject of much investigation and deliberation. These are very complex questions neither easily nor quickly resolved.[19] As a result there are the type of cases most frequently tried to a conclusion, and in this state at least, with a statistical result favoring the physician.

References

1. Medical Malpractice: The Patient Versus the Physician. A study submitted by the Sub-Committee on Executive Reorganization November 20, 1969, to the Committee on Government Operations, U. S. Senate, printed by the U. S. Printing Office. (Ribicoff Report)
2. Medical Malpractice, ibid, Pages 25, 435, 505, 1005 and 1041.
3. Lawyers Medical Cyclopedia Supplement §2.41 to §2.43 and §2.45.
4. Douglass Michigan Reports, Vol. 1, Published by Callaghan and Company.
5. This figure is approximated. An actual count was not undertaken. It also should be noted that a measurable number of these decisions dealt with criminal cases as distinguished from civil cases although the large majority deal with civil matters.
6. This search was concluded with decisions published through November 1968. The cases were analyzed and an article was published in the *Michigan State Bar Journal,* Vol. 49, No. 10, October 1970, by Mr. Charfoos titled "Medical Malpractice in Michigan."
7. Since the original article was prepared six more cases have been decided by the Court of Appeals and two earlier cases were found that had been missed in the original search.

DRUG THERAPY PROBLEMS

By Glenn Bruno
Ann Arbor

Q. Is Cat Scratch antigen commercially available? (L.S., Phoenix, Pa.)

A. *Cat Scratch Fever is an allergic reaction occurring in persons sensitive to some unknown agent associated primarily with cats. Lymphadenitis is the most common symptom of this reaction. The antigenic material is obtained from suppurative material found in the lesions of infected persons. Although the antigen is not commercially available, information as to its source is available in the Drug Information Center.*

Q. Is there any precedent for using Nalline rather than Lorfan to treat narcotic overdose? (G.B., Ann Arbor)

A. *Both Nalline (nalorphine) and Lorfan (levallorphan) have the same activity against narcotic-induced respiratory depression.*

Lorfan is 5 times more potent than Nalline, therefore, the equivalent dose should be 1/5 that of Nalline. Care should be exercised to see that the dosages are not confused.

Q. Can Prostaglandins be used as a "day after pill?" (G.B., Ann Arbor)

A. *Prostaglandins have not been used as a "day after pill" per se but there have been studies using them in the form of a vaginal suppository. They induce menstruation after a missed period and thus can abort the implantation of the fertilized ovum.*

Q. What is the toxicity of Sodium Nitroprusside when used for hypertensive crisis? (J.B., Ann Arbor)

A. *Sodium Nitroprusside is an investigational drug used as an extremely rapid acting hypotensive agent in the management of hypertensive crisis. Other than the caution against too rapid a change in blood pressure, there is the possibility of thiocyanate toxicity. Nitroprusside is converted into thiocyanate ion in the body. This conversion is particularly important if large doses are required for more than 24 hours and could lead to psychosis and delirium.*

Q. What is the difference between prednisone and methylprednisolone? (D.B., Ann Arbor)

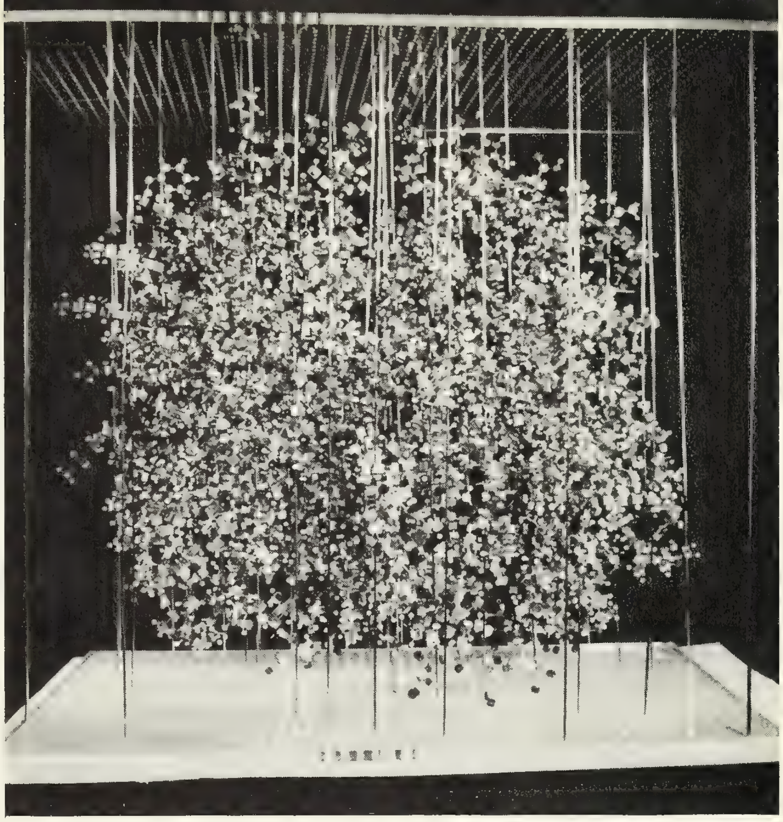
A. *Methylprednisolone has slightly HIGHER anti inflammatory action (125%) and LESS sodium retaining potency (68%) than does prednisone.*

Mr. Bruno is a pharmacy resident affiliated with the Michigan Regional Drug Information Center, University Hospital, Ann Arbor.

MALPRACTICE IN MICHIGAN/Continued

8. The actual cases are completely cited in the article noted in Footnote 6.
9. The statute is titled "Physician and Nurse's Emergency care."
"An act to relieve physicians and registered nurses from civil liability when rendering emergency care at the scene of an emergency." P.A. 1963, No. 17, Eff. Sept. 6, Cited as Michigan Compiled Laws Annotated 691.1501.
10. Michigan Compiled Laws Annotated 600.5805, P.A. 1961, No. 236, Eff. January 1, 1963.
11. Michigan Compiled Laws Annotated 600.5838, P.A. 1961, No. 236, Eff. January 1, 1963.
12. Michigan Compiled Laws Annotated 600.5851.
13. Michigan Compiled Laws Annotated 600.5853.
14. Michigan Compiled Laws Annotated 600.5855.
15. "Although a good result may be expected, I know that the practice of medicine and surgery is not an exact science and that therefore, reputable practitioners cannot properly guarantee results. I acknowledge that no guarantee or assurance has been made by anyone regarding the outcome of the operation which I have herein requested and authorized."
16. Report, First National Conference on Medical Malpractice, February 7-8, 1970, Chicago, Illinois.
17. Medical Malpractice: The Patient versus the Physician. Page 5, Supra.
18. Medical Malpractice: The Patient versus the Physician, supra, pages 5 and 6.
19. Medical Malpractice: The Patient versus the Physician, supra, page 5.

Fig. 1: This model represents one molecule of normal human hemoglobin magnified 127 million times and is scaled to one-half inch per Angstrom. The heme groups for each of the two alpha and the two beta globin chains are precisely positioned. Each alpha globin chain contains 141 amino acid residues; each beta globin chain contains 146 amino acid residues. There are 10,000 atoms in this model. This model, which has a gem-like, scintillating quality, measures approximately 3 cubic feet. It was conceived and constructed by Dr. Makio Murayama of the National Institutes of Health.



Sickle cell disease:

A molecular approach to pathogenesis, diagnosis and treatment

By Robert M. Nalbandian, MD
Grand Rapids
T. N. Evans, MD
Detroit

Sickle cell disease is now one of the well understood diseases.

Twenty-two years ago, Pauling and his associates[1] produced experimental proof that sickle cell anemia was a molecular disease. They demonstrated a genetically controlled molecular structural anomaly of hemoglobin S. Nineteen years ago Pauling predicted[2] that knowledge of the complete structure of the hemoglobin S molecule would lead to improved therapeutic methods.

Pauling's prophecy has been fulfilled. His work in 1949 initiated a series of investigations of hemoglobin at the molecular level. Braunitzer, Perutz, Ingram, and Hunt made significant contributions. Murayama in 1966[3] published his hypothesis for the molecular mechanism of sickling in S hemoglobin. His hypothesis was derived from construction of a precision model of the hemoglobin molecule on a scale of 127 million to 1 (**Figure 1**). Murayama's slight modification of his original concepts[4] are in complete agreement with the X-ray crystallography data on hemoglobin developed by Perutz and co-workers. Murayama's hypothesis has led to our development of the following contributions.[4-14]

These include: (1) three new specific tests for S hemoglobin, each with a molecular basis; (2) a therapeutic strategy for the treatment of sickle cell crisis consisting of a chemical attack on the intertetrameric hydrophobic bonds responsible for sickling; (3) specification of molecular properties of an ideal chemotherapeutic agent leading to the selection of urea; (4) optical and electron microscopy evidence for the desickling effect of urea in appropriate solutions; (5) the evolution of a clinical protocol for the use of intravenous urea in the treatment of acute sickle cell crisis; (6) the oral use for the prophylactic treatment of sickle cell disease. These are all a direct consequence of the modified Murayama hypothesis and are a confirmation of the validity of his view of the molecular sickling mechanism in hemoglobin S erythrocytes.

Pauling recently wrote:[4]

"Sickle cell anemia is the first disease to become thoroughly understood; the first disease

---

Doctor Nalbandian is associate pathologist, Blodgett Memorial Hospital, Grand Rapids, and consultant to U. S. Army Medical Research Laboratory, Fort Knox, Kentucky. Doctor Evans is professor and chairman, Department of Gynecology and Obstetrics, Wayne State University School of Medicine, Detroit and acting dean.

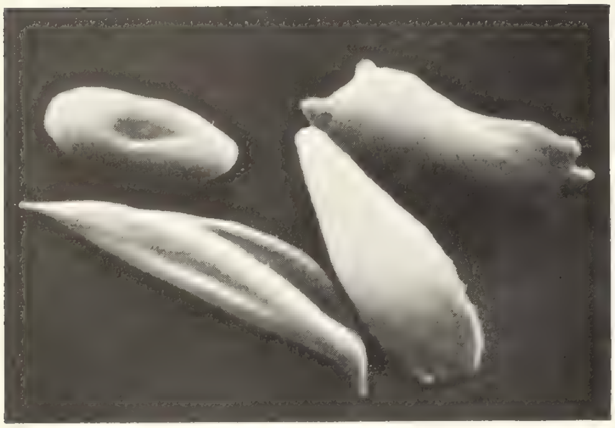


Fig. 2A: Red blood cells from a patient in sickle cell crisis. Three of these cells are grossly abnormal (sickled). The other cell (upper left) although slightly elongated still retains its typical donut configuration reflecting the normal biconcave disc (Life-saver) form, usually comprising 85% or more of the normal red blood cell population. This patient had 39% sickle forms in her circulating blood; in contrast, a normal individual would not have any sickle forms. Magnification x 8700. (Electron photomicrograph taken by Marian I. Barnhart, Ph.D.; aided by Bargman Foundation for Cell and Molecular Research, Wayne State University School of Medicine.)

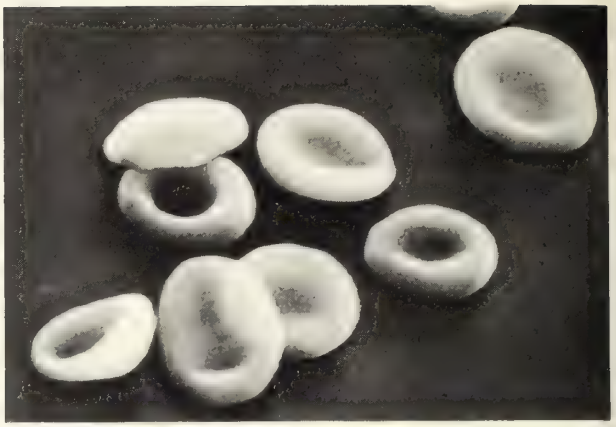


Fig. 2B: Red blood cells from the same patient as in Figure 2A four hours after intravenous treatment with urea in invert sugar. All of these red blood cells show essentially normal shapes (donut or Life-saver appearance) and membrane detail. Essentially all of the circulating red blood cells were corrected by four hours of treatment and persisted in this state at eight hours after the treatment period. Magnification x 6750. (Electron photomicrograph taken by Marian I. Barnhart, Ph.D.; aided by Bargman Foundation for Cell and Molecular Research, Wayne State University School of Medicine.)

> for which a clear and complete explanation of the manifestations could be formulated. This understanding of the nature of the disease has led . . . to the development of a method of controlling the crisis of the disease. Sickle cell anemia, thus, has become the first disease for which there is a known molecular basis for pathogenesis, a molecular basis for diagnosis, and a molecular basis for treatment."

Deductive Selection of Urea As a Chemotherapeutic Agent

Perhaps the most important single extension of the Murayama hypothesis which we have made was the development of a therapeutic strategy to achieve desickling of sickled erythrocytes in the living patient.[4,7] This concept consisted of mounting a chemical attack on the hydrophobic bonds implicated by Murayama as essential for sickling. Consideration of the available molecular information with recent advances in physical chemistry in the understanding of the hydrophobic bond and its properties led us to make a series of deductive specifications about molecular structure.

Our analysis led us initially and directly to the use of urea to correct the molecular defect. One molar urea in aqueous solutions reversed sickling of cells sickled by and in the presence of 2% $Na_2S_2O_5$. However, evidence of hemolysis was observed within 30 minutes after this experiment. We then observed that urea in sugar solutions (invert sugar or glucose) was an effective and ideal desickling agent without producing hemolysis.[4,7,8,11,12-14] Optical and electron microscopy evidence of such desickling by urea in sugar solutions has been published by one of the members of our research team, Dr. Marian I. Barnhart[4,7] (**Fig. 2A, 2B**).

The significance of the theoretical and deductive approach to the selection of a chemotherapeutic desickling agent led Pauling to write:[4]

> "Most methods of therapy have been empirical in origin. We might consider that medicine is now entering a new stage in which the detailed molecular understanding of the nature of diseases will be used effectively in the search for therapeutic methods."

Please send REPRINT REQUESTS TO: Robert M. Nalbandian, MD, Associate Pathologist, Blodgett Memorial Hospital, Grand Rapids, Michigan 49506.

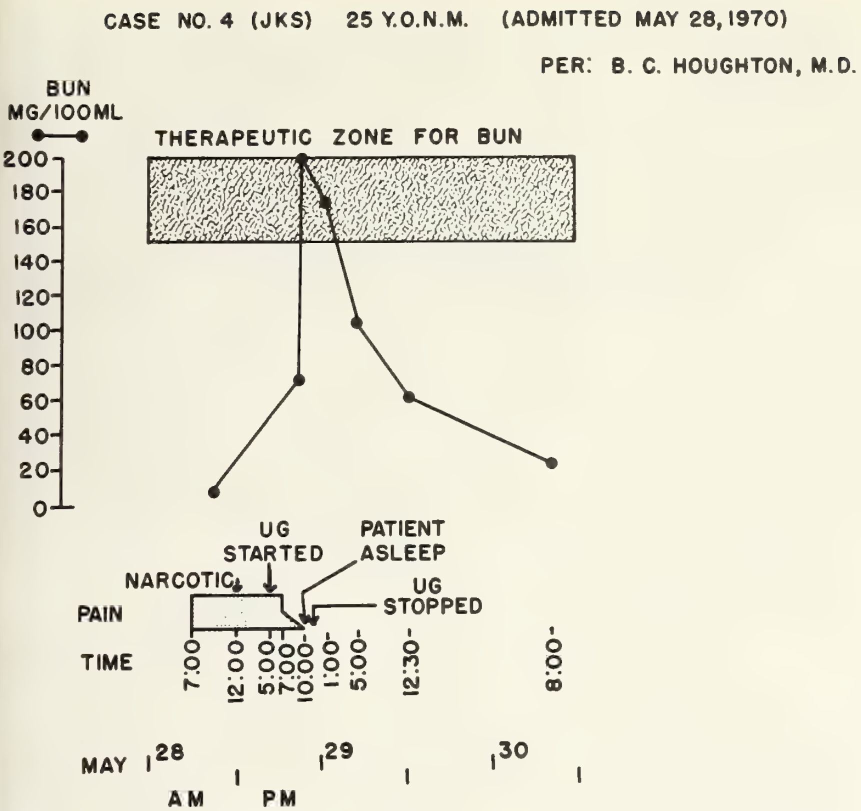


Fig. 3: The published protocols for the intravenous use of urea in sugar solutions for the treatment of acute sickle cell crisis are designed to produce clinical results as characterized in this case. This 25-year-old Nigerian student was admitted in acute sickle cell crisis in May of 1970. In the previous 13 months he had had 13 severe crises, lasting from five to 10 days each at virtually monthly intervals, all of which required narcotics and which, nevertheless, were ineffective. Five hours after his last narcotic dose, again ineffective, urea in glucose solution was started at 5 p.m. Two hours later the patient was completely relaxed and stated that the pain had diminished. By 9:30 p.m. the patient was asleep. The infusion was discontinued then. The patient was later put on oral prophylactic urea and his hematocrit climbed from 24% in May to 30% in September of 1970; at that time he voluntarily discontinued daily urea dosage because he felt "so well." Two weeks thereafter his hematocrit had fallen to the original level of 24%. He now uses urea only to fend off impending attacks of acute sickle cell crisis. Additional clinical details are available elsewhere.[4]

Development of New Diagnostic Tests For S Hemoglobin

Since 1910 when sickle cell disease was first described until 1970, no specific tests existed for the routine diagnosis of S hemoglobin. Non-specificity of previous tests has resulted in (1) inaccurate data regarding prevalence associated with this disease; (2) errors in diagnosis of sickle cell disease; (3) perpetuation of clinical myths such as the long-term homozygous S survivor.

In 1970, three new tests, one of them automated, which have a molecular basis and extraordinary specificity were described. The first of these is the Murayama test[4-5,15] (named by us in recognition of Dr. Murayama's contributions). This is a visual method for the detection of implicated hydrophobic bonds essential for sickling in concentrated, deoxygenated hemolysates. In association with Dr. Raymond L. Henry the nonspecific Sickledex test was modified by the use of urea in a tube test and automated versions.[4,9,10] The Murayama test is an excellent and powerful research tool but is not suitable for the detection of hemoglobin S in large populations.

The other two tests are applicable to mass screening. A mass survey of large human populations has been undertaken in two field studies, one in collaboration with the U. S. Army Medical Research Laboratory at Fort Knox and the other in association with Dr. Jeanne M. Lusher of Children's Hospital at Wayne State University School of Medicine. The only disadvantage noted in these field trials was the cost of $1 per test when the Sickledex solution was used. Recently, reagents have been developed[16] which decrease the cost of this test to 2½¢. These reagents in several hundred automated tests have proved to be as satisfactory as the Sickledex solution. Hence, large populations may be surveyed for hemoglobin S at the rate of 120 tests per hour at insignificant cost.

The immediate effect of such an automated diagnostic technique, which may detect S hemoglobin and possibly non-S sickling hemoglobins, will lead directly to (1) an accurate assessment of incidence; (2) medical genetic counseling for victims of the disease; and (3) treatment before irreversible damage occurs. Thus, the tools and techniques for large human population surveys are available for the diagnosis and treatment of this disease.

Intravenous Urea in the Treatment Of Sickle Cell Crisis

Protocols for the intravenous use of urea in sugar solutions have been published.[4,8] To date we have administered i.v. urea for the treatment of the acute sickle cell crisis 15 times in 14 patients. In every case of acute sickle cell crisis where the provisions of our published protocols have been followed precisely, there have been no failures, deaths or serious complications. Hence, explicit compliance with our protocols in the treatment of acute sickle cell crisis will result in safe, effective treatment *without the use of narcotics or analgesics*. We have completed our safety and feasibility studies and are currently entering a large series of controlled, randomized studies as the final phase of evaluation of our protocols. We have made these protocols available to interested investigators who wish to conduct independent controlled studies of their own. However, we urge faithful compliance with all provisions of our protocol in order to maintain safety and therapeutic effectiveness.

Urea, even though produced in the liver and endogenous to the body, when used as a pharmaceutical agent may, like any other agent, be mishandled with adverse consequences for the patient. There are two side reactions to the use of urea intravenously. One is desirable; the other is undesirable. The desirable side effect is one of sedation of variable degree which is most appropriate in the treatment of an excruciatingly agonizing and painful disorder. The undesirable side effect is a marked diuresis. Dehydration in a sickle cell disease patient is always hazardous and under condition of a crisis dehydration can be lethal. However, by the use of techniques and procedures explicitly described in our protocol, problems of hydration and maintenance of adequate fluid volume are easily managed. Intravenous urea in sugar solutions properly administered is safe and nontoxic. Since 1956 Dr. Manucher Javid, Professor of Neurosurgery at the University of Wisconsin has used this preparation to treat cerebral edema in over 2,200 cases without attributable mortality.

Although the therapeutic principle and clinical rationale for the treatment of intravenous urea in sugar solutions for the treatment of acute sickle cell crisis has been exhaustively discussed elsewhere,[4,7,8] the therapeutic principle should be briefly restated.

We believe that urea is an effective chemotherapeutic desickling agent because it alters the steric configuration of the hemoglobin S molecule in such a way that it inhibits the lethal molecular property of sickling without inhibiting the critical life-support property of oxygen transport.

Studies to elucidate this point are currently under way by Professor James M. Orten of Wayne State University. Accordingly, a high blood urea gradient is established as quickly as possible and maintained until that point in time when the patient reports relief from pain. The high BUN gradient causes diffusion of urea at the site of vasculo-occlusion in appropriate stoichiometric concentrations such that the reversal of the sickled erythrocytes takes place and circulation is restored with rapid correction of all disturbed metabolic parameters.

The point to realize is that the dose per kilogram of urea is of NO pertinence; the crucial feature is the maintenance of a high BUN gradient between the limits of 150-200 mg% by appropriate adjustment of the rate of urea infusions. Two typical cases summarized from among our preliminary trials are to be found in **Figures 3 and 4**. More extensive details on both of these and other cases are available.[4]

Oral Prophylactic Treatment Of Sickle Cell Anemia

The therapeutic basis for oral phophylactic urea rests on the experimental demonstration in our laboratory that it takes *less urea* to block the sickling event in susceptible cells than it does to reverse sickling in aliquots of such cells. The rationale for the therapeutic effectiveness of low doses of oral urea have been discussed.[4, 8, 12] The clinical protocol for the oral prophylactic use of urea has been reproduced in detail elsewhere.[4,8]

From among our total population of over 80 patients currently on the oral urea therapeutic regimen it is our preliminary but considered opinion that oral urea as presented in our protocol has reduced and eliminated episodes of crisis, banished refractory incapacitating bone pain, cor-

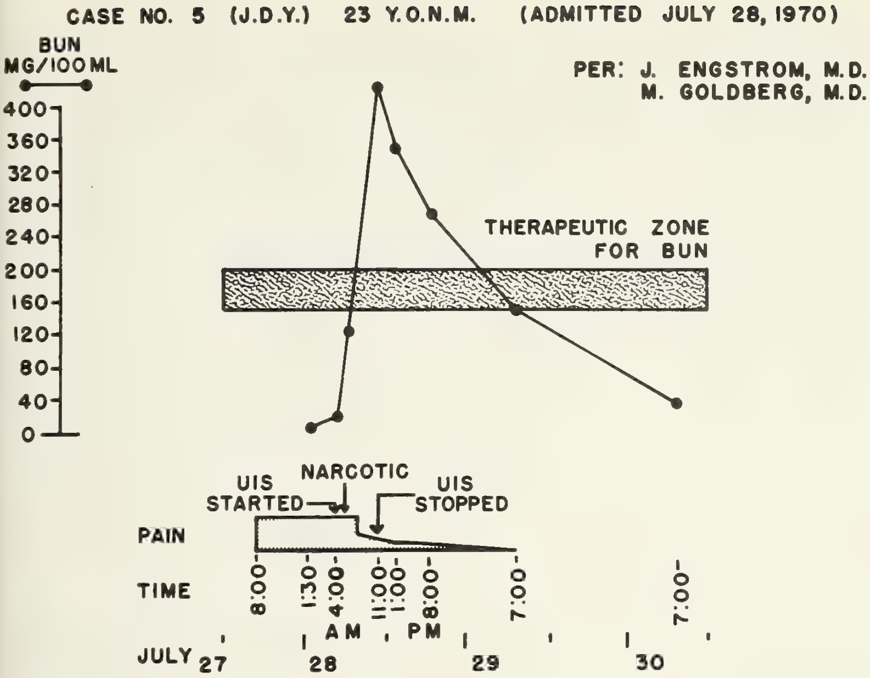


Fig. 4: The safety of intravenous urea in sugar solutions, when properly managed, is dramatically demonstrated in a case of acute sickle cell crisis conducted by Drs. John Engstrom and Marshall Goldberg of Hurley Hospital in Flint, Michigan. In this case, a 23-year-old Black male laborer had signs and symptoms of acute sickle cell crisis of five hours duration. At 1:30 p.m. on the day of treatment urea in invert sugar was started intravenously. A peak level of BUN at 424 mg% was quickly obtained, a level which is twice the therapeutic zone. Intelligent management by the attending physicians with appropriate attention to hydration resulted in an entirely uneventful course in clinical recovery. The case is shown primarily to document the fact that acute BUN levels of the order of 400 mg% and more are compatible with life, provided adequate hydration is maintained. The recommended therapeutic range in our published protocols is of the order of 150-200 mg%. Complete details of the case are available elsewhere.[4]

rected febrile pulmonary infiltrates refractory to other modes of therapy, improved hemoglobin levels by prolonging red blood cell survival times, remitted priapism refractory to other treatment and increased the mental and physical well-being of patients.

Under investigation at the present time is the use of oral urea in SC hemoglobinopathy in pregnancy. It is well known that SC hemoglobinopathy in pregnancy is often hazardous, culminating in a 25% maternal mortality rate. A case of SC hemoglobinopathy from the fifth month of her pregnancy was managed on oral prophylactic urea by one of us (T.N.E.). No complications occurred during pregnancy which was terminated by a normal delivery. Applications of oral prophylactic urea to the treatment of hematuria in heterozygous S disease and its prophylactic use in anesthesia where intermittent hypoxic episodes have been lethal in both homozygous and heterozygous S patients are underway.

All of these observations must be confirmed by more extensive studies. The initial observations to date are most encouraging.

Conclusions

Extensions by inference and deduction of the Murayama hypothesis for the molecular mechanism of sickling have resulted in a number of significant advances in sickle cell disease. The scope and thrust of our work includes the development of three specific tests for S hemoglobin, each with a molecular basis, a therapeutic strategy for the treatment of sickle cell crisis at the molecular level of reference, the theoretical and deductive selection of urea as an ideal chemotherapeutic agent, the development of optical and electron microscopy evidence for the desickling effect of urea in appropriate sugar solutions, the evolution of clinical protocols for both the intravenous use of urea in sugar solutions in the treatment of acute sickle cell crisis, and the oral use of urea in prophylactic treatment of sickle cell disease including related clinical manifestations.

The consequences of our work are of immediate importance to about 500,000 American Negroes and millions of afflicted individuals elsewhere in the world suffering this dreadful disease. The pathogenesis, diagnosis, and treatment of the painful crisis of sickle cell disease and related conditions now has a recognized molecular basis. Among others, Linus Pauling has suggested that such a uniquely comprehensive view of human disease from aberrant molecule to clinical manifestation is true only of sickle cell anemia at this time. Those physicians who have taken the care to study our several publications and who will follow our clinical protocols both carefully and faithfully will be rewarded by the realization that they can ameliorate tissue infarcts and eliminate the pain in actue sickle cell crisis in victims of this relentless disease without narcotics or analgesics by the use of intravenous urea, shown by us to be safe and effective. The oral, prophylactic use of urea holds the promise of the arrest of this disease.

Qualified investigators are invited to turn their attention to these innovative diagnostic and therapeutic advances in sickle cell disease at the molecular level of reference and to conduct independent, controlled studies. Requisite basic information is available to all.

Acknowledgment

We wish to thank Dr. Walter Seegers, Professor and Chairman of the Department of Physiology, Wayne State University School of Medicine, for his invaluable counsel and support.

References

1. Pauling, L., Itano, H. A., Singer, S. J., and Wells, I. C.: "Sickle Cell Anemia, A Molecular Disease." *Science* 110:543-548, 1949.
2. Pauling, L.: The Hemoglobin Molecule in Health and Disease. *Proceed. of Amer. Philosoph. Soc.* 96:-556-565, 1952.
3. Murayama, J.: Molecular Mechanism of Red Cell "Sickling." *Science* 153:145-149, 1966.
4. "MOLECULAR ASPECTS OF SICKLE CELL HEMOGLOBIN: CLINICAL APPLICATIONS," Nalbandian, R.M., Editor. Publisher: Chas. C. Thomas Co., Springfield, Illinois, U. S. A., Publication date: May, 1971.
5. Nalbandian, R. M., Henry, R. L., Nichols, B. M., Camp, Jr., F. R., Wolf, P. L.: The Murayama test. Part I. Evidence for the modified Murayama hypothesis for the molecular mechanism of sickling. "U. S. Army Medical Research Laboratory Report No. 893." September 17, 1970.
6. Nalbandian, R. M., Henry, R. L., Nichols, B.M., Camp, Jr., F. R., and Wolf, P. L.: The Murayama test. Part II. Principles, Technique, Interpretation and Data. "U. S. Army Medical Research Laboratory Report No. 894." September 17, 1970.
7. Nalbandian, R. M., Henry, R. L., Barnhart, M. I., Camp, Jr., F. R.: Sickling reversed and blocked by urea in invert sugar: optical and electron microscopy evidence. "U. S. Army Medical Research Laboratory Report No. 895." September 17, 1970.
8. Nalbandian, R. M., Henry, R. L., Shultz, G., Camp, Jr., F. R., Wolf, P. L.: Sickle cell crisis terminated by use of urea in invert sugar in two cases. "U. S. Army Medical Research Laboratory Report No. 896." September 17, 1970.
9. Henry, R. L., Nalbandian, R. M., Nichols, B. M., Wolf, P. L., Camp, Jr., F. R.: Modified Sickledex tube test. A specific test for S hemoglobin. "U. S. Army Medical Research Laboratory Report No. 897." September 17, 1970.
10. Henry, R. L., Nalbandian, R. M., Nichols, B. M., Wolf, P. L., Camp, Jr., F. R.: An automated screening method for the specific detection of homozygous and heterozygous S hemoglobin. "U. S. Army Medical Research Laboratory Report No. 898." September 17, 1970.
11. Barnhart, M. I., Lusher, J. M., Henry, R. L., and Nalbandian, R. M.: Electron microscopic evidence of reversal of sickling in crisis by IV urea in invert sugar. Presented at 13th Annual Meeting of the American Society of Hematology, San Juan, Puerto Rico, December 6-8, 1970. *Blood* 36:837, 1970.

We wish to acknowledge the following workers who are members of the Wayne State University-Blodgett Memorial Hospital Sickle Cell Research Team:

Wayne State University School of Medicine

Marian I. Barnhart, PhD
T. N. Evans, MD
Raymond L. Henry, PhD
Jeanne Lusher, MD
James M. Orten, PhD
Collaborating Investigator:
Ananda Prasad, MD

Blodgett Memorial Hospital, Grand Rapids

Robert M. Nalbandian, MD
Bruce M. Nichols, BS
Collaborating Investigators:
Jerry W. Anderson, MD
Alison Scrimgeour, MD
Donald F. Waterman, MD

Other Collaborating Investigators:

Lt. Col. Frank R. Camp, Jr. (MSC)
Ft. Knox, Ky.

Marshall Goldberg, MD and J. Engstrom, MD
Hurley Hospital, Flint

Benjamin C. Houghton, MD
Group Health Hospital, Seattle

Gerald Loomus, MD
Sinai Hospital, Detroit

Garth Schultz, MD
Bronson Methodist Hospital, Kalamazoo

Prof. Max P. Westerman, MD
Chicago Medical School

Paul L. Wolf, MD
Stanford University School of Medicine

12. Nalbandian, R. M., Houghton, B. C., Henry, R. L., and Wolf, P. L.: The molecular basis for the oral, prophylactic use of urea in the treatment of sickle cell anemia. Presented at the 55th Annual Meeting of the Federation of American Societies for Experimental Biology, Chicago, Illinois, April 12-17, 1971. Fed. Proc. 30:684, 1971.

13. Barnhart, M. I., Lusher, J. M., Henry, R. L., and Nalbandian, R. M.: Reversal and inhibition of sickling by urea-glucose. Presented at the 55th Annual Meeting of the Federation of American Societies for Experimental Biology, Chicago, Illinois, April 12-17, 1971. Fed. Proc. 30:684, 1971.

14. Nalbandian, R. M., Henry, R. L., Shultz, G., and Avery, N. L.: SS crisis treated successfully by urea in invert sugar. Presented at 52nd Annual Meeting of the American College of Physicians, March 29-April 2, 1971. Denver, Colorado.

15. Nalbandian, R. M., Henry, R. L., Nichols, B. M., Camp, Jr., F. R., Wolf, P. L.: Molecular basis for a simple, specific test for S Hemoglobin: the Murayama Test. *Clin. Chem.* 16:945-950, 1970.

16. Nalbandian, R. M., and Nichols, B. M.: Unpublished data.

AUTHORS' NOTE: The six listed U.S. Army Medical Research Laboratory Reports, numbers 893 through 898, are available from (1) The Defense Documentation Center, Cameron Station Virginia 22314 or (2) The Clearing House for Federal, Scientific, and Technical Information, Department of Commerce, Washington, D.C. 20310.

Gastric mucosal hemorrhage following sepsis and trauma

By Fredrick Rector, MD
Detroit

The incidence of "stress" gastric bleeding has risen markedly over the past few years as the medical community has become more adept in maintaining life in patients who have been subjected to severe trauma and/or sepsis.

Our Emergency Division at Detroit General Hospital treats an average of two patients per week who require transfusion for this disease. Most of these patients have undergone severe trauma mainly due to gunshot wounds of the chest and/or abdomen with resultant peritoneal contamination and subsequent sepsis.

Peritonitis and pulmonary insufficiency usually precedes the onset of bleeding. The respiratory insufficiency in these patients is usually that type which typically accompanies peritoneal contamination but occasionally it is simple postoperative atelectasis which clears on coughing and deep breathing. The arterial blood gases show that the PO_2 is usually below 80mm of Hg and the O_2 saturation is usually greater than 90%.

Several patients had associated head injuries, but bleeding usually did not begin until they developed superimposed pneumonitis.

Most patients were treated by ice-saline lavage, followed by an hourly antacid regimen. The lavage usually temporarily controlled the bleeding, although subsequent recurrence was common. Thirty-six patients in whom bleeding could not be controlled permanently by ice-saline lavage or gastric cooling, underwent surgery; 18 died. The site of bleeding, confirmed by preoperative and interoperative gastroscopy and gastric photography was mainly in the proximal portion of the stomach in the fundic mucosa which typically was covered with superficial erosions measuring up to 25 mm in diameter.

The bleeding appeared to cease, after vagotomy, in 14 patients. This effect of vagotomy on bleeding was confirmed by pre-/and postvagotomy gastroscopy in two patients. All 14 of these patients had simple drainage procedures added; six rebled. Vagotomy and distal gastrectomy was the most successful procedure in preventing rebleeding in that none of seven patients so treated rebled. Distal gastrectomy alone was performed in six patiens of whom four rebled.

Histologic studies of those patients who underwent resection showed severe mucosal edema and hemorrhage intermixed with areas of full-thickness mucosal necrosis. PAS mucosal staining was decreased over the areas of mucosal necrosis and normal in those areas of mucosal edema. Pre-bleed acid secretion was generally high in those patients who underwent surgery and the blood histamine levels were normal.

Doctor Rector is a general surgery resident at Detroit General Hospital. He presented this paper before the Detroit Surgical Association.

Michigan Authors

S. I. Harrison, MD, Ann Arbor, "Crisis in Child Mental Health (Joint Commission Report)," book review, page 1331, *Journal of the American Medical Association,* Feb. 22, 1971.

P. A. Kvale, MD, Detroit, et al, "Ampicillin-Probenecid Orally for Male Gonorrhea," page 1449, *Journal of the American Medical Association,* March 1, 1971.

C. P. Hodgkinson, MD, Detroit, "Papanicolaou Smears after Hysterectomy," Questions and Answers, page 1508, *Journal of the American Medical Association,* March 1, 1971.

F. L. Morton, MD, Pontiac, "The Neighborhood Health Center," page 1825, *Journal of the American Medical Association,* March 15, 1971.

William D. Diamond, MD, and Robert A. Buchanan, MD, Mt. Pleasant, "Effect of Phenobarbital on Diphenylhydantoin Plasma Levels," page 17, *Michigan Mental Health Research Bulletin,* Fall, 1970.

C. E. Schorer, MD, Detroit, "The Waiting List," page 20, *Michigan Mental Health Research Bulletin,* Fall, 1970.

Steven A. Myers, MD, and Kenneth G. Schooff, MD, "A New Breed of Addict," page 35, *Michigan Mental Health Research Bulletin,* Fall, 1970.

Donald J. Jaffar, MD, Southfield, "Urologic Emergencies," page 191, *Journal of the Kentucky Medical Association,* March, 1971.

Marvin D. Fields, MD, Detroit, et al, "Relationship of Blood Lymphocyte Count to Survival in Breast Cancer," page 135, *Journal of the Kansas Medical Society,* March, 1971.

Frank Greenslit, MD, Allen Park, et al, "Pigmentation of Nails in Adrenal Insufficiency," page 1666, *JAMA,* March 8, 1971.

Michael A. Wainstock, MD, Detroit, "Ultrasonography in Ophthalmology," editor and contributor, *International Ophthalmology Clinics,* February, 1970.

Irving I. Edgar, MD, Detroit, *Shakespeare, Medicine and Psychiatry,* Philosophical Library, Inc., 15 E. 40th St., New York, N.Y. A chronological-historical survey and evaluation of critical opinion of the medical and psychopathological knowledge in the works of Shakespeare. A discussion, also of the psychoanalytic approach to Shakespeare's writings.

Warren Wille, MD, Jackson, "Citizens Who Commit Homicides," *Interamerican Journal of Psychology,* June, 1970.

Wolf W. Zuelzer, MD, Detroit, "The Pediatrician and the Species: Some Implications of our Achievements," page 339, *Pediatrics,* February, 1971.

LAND OF HOSPITALITY
michigan
MAY 15-22
MICHIGAN WEEK

Myron E. Wegman, MD, Ann Arbor, "Annual Summary of Vital Statistics—1969," page 461, *Pediatrics,* February, 1971.

Albert E. Heustis, MD, East Lansing, "Surveillance of Cardiac Care Units," page 6, *Michigan Hospitals,* February, 1971.

Karl S. Klicka, MD, Wayne, "Report of the Committee on Federal Legislation," page 7, *Michigan Hospitals,* February, 1971.

Irving Feller, MD, Ann Arbor, "Improved Charting: A condensed form for summary charting provides a comprehensive daily care record for the seriously ill patient," page 100, *Hospitals, Journal of the American Hospital Association,* March 16, 1971.

Kenneth B. Herrington, MD, Bad Axe, his views included in "A Rational Approach to Drug Therapy," *Patient Care,* Oct. 31, 1970.

Walter De Giulio, MD, Detroit and S. M. Lindenauer, MD, Ann Arbor, "Tolonium Chloride for Parathyroid Localization," page 2302, *The Journal of the American Medical Association,* Dec. 28, 1970.

D. C. Blair, MD, and W. J. Murray, MD, PhD, Ann Arbor, and others, "Biological Availability of Oxytetracycline," page 251, *Journal of the American Medical Association,* Jan. 11, 1971.

Samuel J. Nichamin, MD, Southfield, "Perceptually-Distorted Behavior Patterns and Learning Disabilities; An Abridged Treatment approach," *Journal of Pediatric Ophthalmology,* May, 1970.

R. K. Laros, Jr., MD, Eloise, and J. A. Penner, MD, Ann Arbor, "Thrombocytopenic Purpura Treated With Cyclophosphamide," page 445, *Journal of the American Medical Association,* Jan. 18, 1971.

Irving Feller, MD, and K. H. Crane, MS, Ann Arbor, "Burn-Care Facilities in the US," page 467, *Journal of the AMA,* Jan. 18, 1971.

R. K. Ferguson, MD, East Lansing, and others, "Self-Poisoning with Aspirin and other drugs," a letter, page 1710, *Journal of the American Medical Association,* Nov. 30.

K. R. Magee, MD, Ann Arbor, "Aphasiology and Language," a book review, page 1712, *Journal of the American Medical Association,* Nov. 30, 1970.

Doctor Norman Clarke's fabulous collection of Michigan history

Norman E. Clarke, MD
Physician,
Historian
and book collector

By Peter A. Hoheisel
Detroit

"I was always a collector, even as a child. My book collecting started with Mark Twain in the 1920's," says Norman E. Clarke, MD, a Detroit cardiologist.

Not only has Doctor Clarke practiced medicine full time for 47 years, but he has earned a reputation as one of the foremost book collectors in the United States.

In 1955 he donated his collection to Central Michigan University in Mount Pleasant, thereby starting the Clarke Historical Library which houses one of the largest collections of Michigan and Great Lakes area historical documents.

The key to Doctor Clarke's collecting passion is his profound conviction that accurate history can be written only by using original and authentic documents—anything from legal documents to diaries.

He dislikes the type of history which is written from secondary sources and feels that there are too few scholars willing to do the groundwork in original documents which is required for an accurate presentation of what life was really like in the past.

"The history of Michigan, for example, has never been thoroughly done," he says. "We have a huge amount of material in the Clarke Library which never has been sifted. We have documents on the mining, logging, railroading, and fur trading period of Michigan, and on the Upper Peninsula. These are areas which require a great deal more historical work."

The Clarke Historical Library at Central Michigan receives its support from gifts and university allocations. Doctor Norman Clarke, the original donor, continues to support the library with generous gifts. A special fund for the microfilming of weekly newspaper files is financed by the Kresge Foundation, the MacGregor Fund, the Booth Newspapers, and a number of individual donors. In addition, much time is spent searching for historical documents and rare books.

One of the best collections of historical documents of Michigan and the Great Lakes territory is kept at the Clarke Library.

The Library was founded in 1955 and contains thousands of books, pamphlets, manuscripts, maps, etc., pertaining to the Great Lakes area and Michigan. It also has a large collection of newspapers that date back to the 1760's.

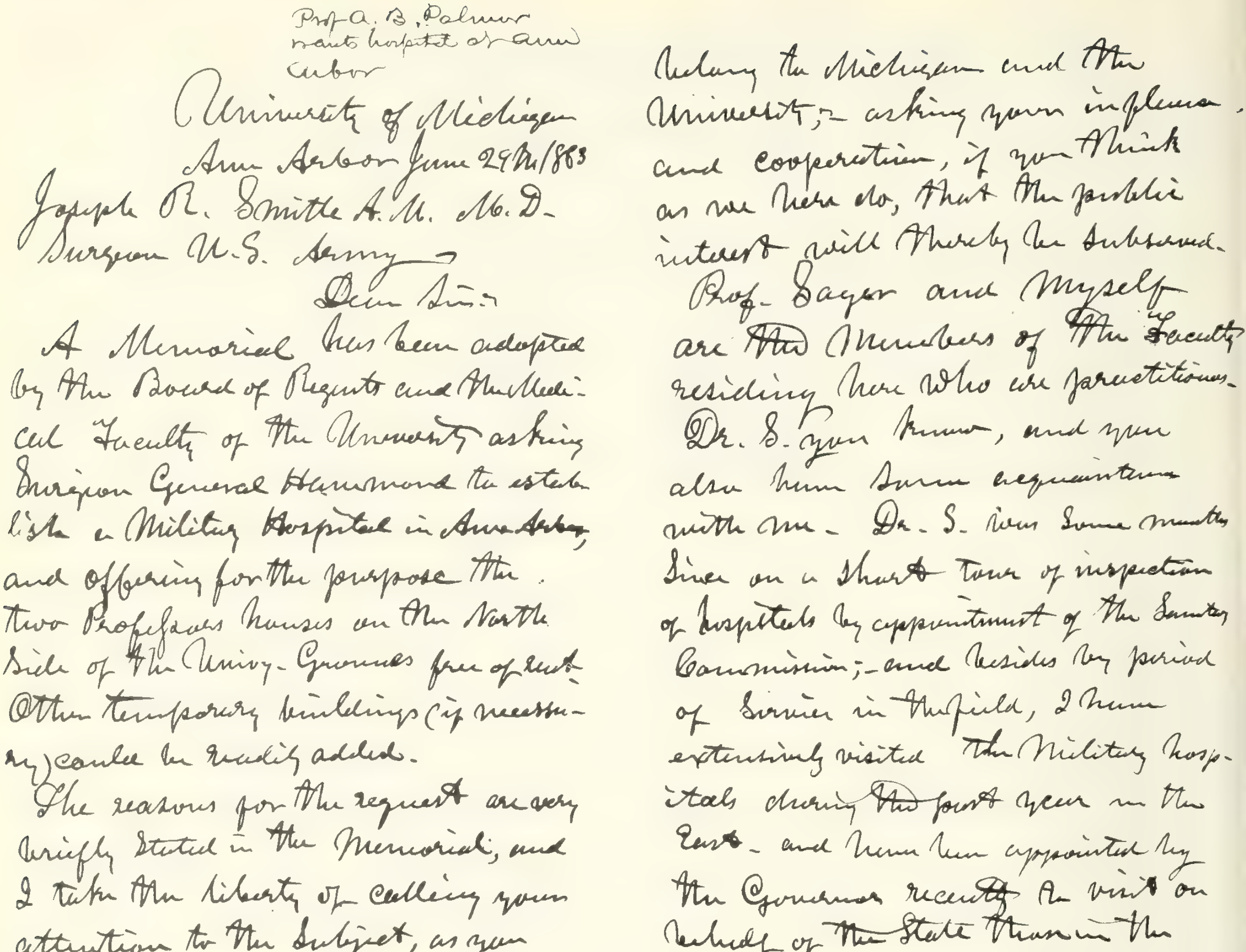
At present a $50,000 fund is being used to microfilm early Michigan newspapers which are a basic source of history and research. "We probably have the most complete collection of Michigan newspapers in the State," says Doctor Clarke.

"Another important part of our collection," Doctor Clarke continued, "is our rare maps. We have about 1,100 maps covering the Great Lakes and Midwest area. They go back to the 17th century."

"Many papers from important early Michigan families are among our collections," he added. "Among the most important are the Wendell papers from the fur trading days on Mackinac Island, the Barbeau papers, the Father Richard papers, Piterel papers, and the Robert Navarre papers. There are also extensive collections of letters and diaries of the Reverend Abel Bingham, Baptist missionary at Sault Ste. Marie from 1828 to 1855, and those of Amos Gould of Owosso, the latter including letters and case books of Doctor Joseph N. Graham, one of the pioneer users of chloroform in the Midwest."

"Some of the most interesting diaries and letters in the Library were written by Michigan people who went west in the Gold Rush days. A Doctor Blackwood of Ann Arbor went west in 1849 and was followed by his wife and son. All their letters and diaries are well-written and give descriptive accounts of their experiences going around the Horn and by overland.

Mr. Hoheisel is completing work on a master's degree in English at Wayne State University, where he is also a member of the faculty. Mr. Hoheisel was formerly a member of the MSMS Communications Department staff.



Prof. A. B. Palmer
wants hospital at Ann
Arbor

University of Michigan
Ann Arbor June 29th/1863
Joseph R. Smith A.M. M.D.
Surgeon U.S. Army
Dear Sir:

A Memorial has been adopted by the Board of Regents and the Medical Faculty of the University asking Surgeon General Hammond to establish a Military Hospital in Ann Arbor, and offering for the purpose the two Professors houses on the North Side of the Univ. Grounds free of rent. Other temporary buildings (if necessary) could be readily added.

The reasons for the request are very briefly stated in the Memorial, and I take the liberty of calling your attention to the subject, as you belong to Michigan and the University;— asking your influence and cooperation, if you think as we here do, that the public interest will thereby be subserved.

Prof. Sager and myself are the Members of the Faculty residing here who are practitioners. Dr. S. you know, and you also have some acquaintance with me. Dr. S. was some months since on a short tour of inspection of hospitals by appointment of the Sanitary Commission;— and besides my period of service in the field, I have extensively visited the Military hospitals during the past year in the East— and have been appointed by the Governor recently to visit on behalf of the State those in the

The original letter, by Prof. A. B. Palmer, of Ann Arbor, announcing funds, facilities and faculty available for the founding of the university hospital. The letter is part of the Clarke collection.

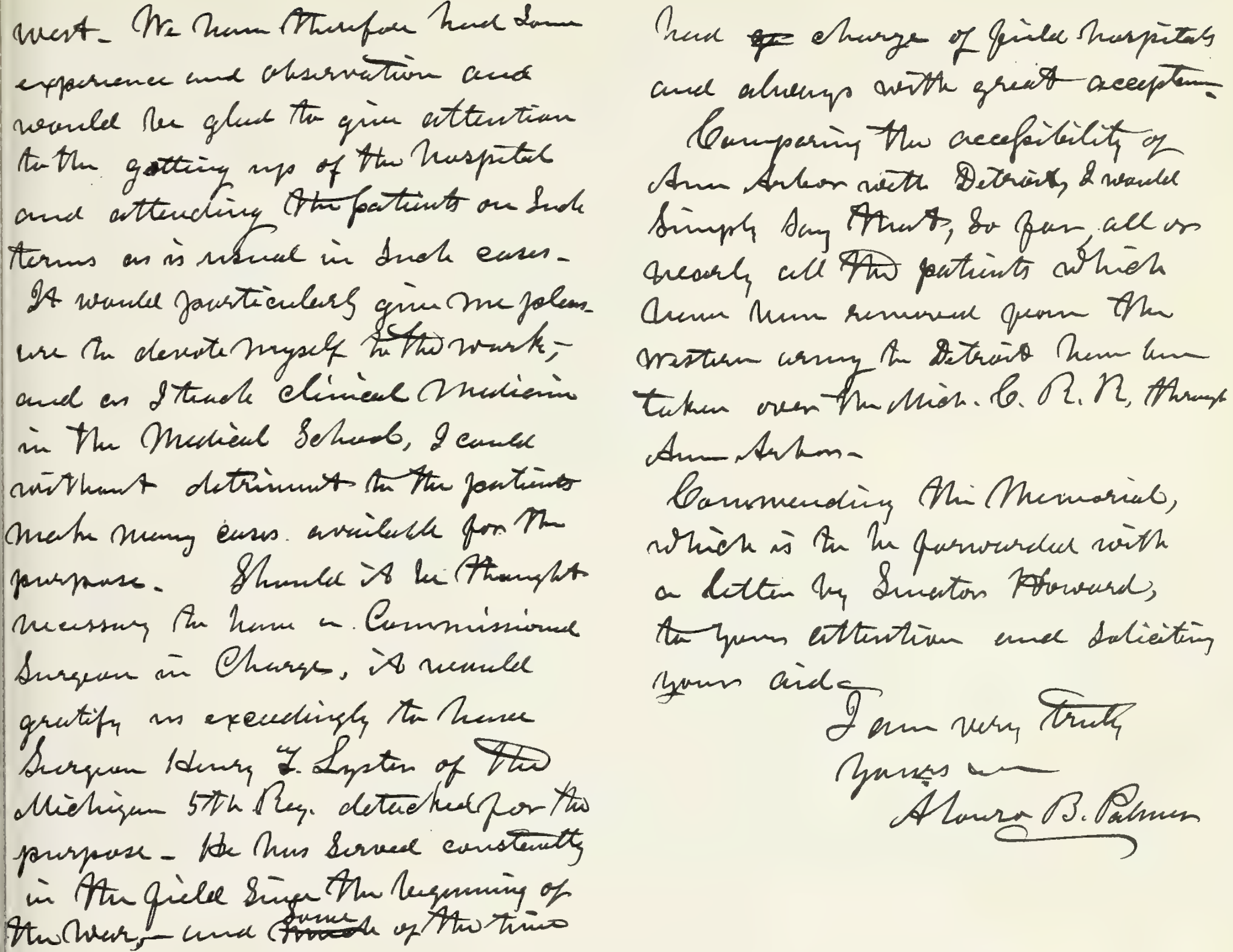
"In one of the items it is recalled by the son that a great number of people who died on the overland trip were killed beneath the wheels of the large wagons. I had never read this anywhere else," Doctor Clarke said. "Another thing he reported was that people who got sick were left to die along the trail after they were put in a little tent and given some food."

"Another important group of materials that we have is the Beaver Island Mormon collection from around 1830 to 1850, similar to the collection at Yale University. This includes pamphlets and books printed on Beaver Island, all exceedingly rare. Indeed, some of the imprints in the Clarke Historical Library are the only known copies."

"In the collection there is also much material on the early history of medicine in Michigan. There is the original letter that started the founding of the University Hospital in Ann Arbor, and there are copies of printed territorial certificates admitting doctors to practice medicine in early territorial counties."

"A series of letters from a Doctor Porter in Pontiac provide most interesting material on the practice of medicine in early days. The earliest letter is dated 1828 and Pontiac was founded in 1819. In these letters Doctor Porter tells about a turkey shoot at Christmas, the quarrels between doctors, and an incident involving a sick Indian chief in Saginaw. One of the Indians had come to Pontiac to get Doctor Porter who made the trip to Saginaw in a three-day journey through the woods. When he got there the chief had died. There was no fee and his horse died on his way back to Pontiac."

"From these letters we can see how alcoholism



west – We have therefore had some experience and observation and would be glad to give attention to the getting up of the hospital and attending the patients on such terms as is usual in such cases –

It would particularly give me pleasure to devote myself to the work; – and as I teach Clinical Medicine in the Medical School, I could without detriment to the patients make many cases available for the purpose – Should it be thought necessary to have a Commissioned Surgeon in Charge, it would gratify us exceedingly to have Surgeon Henry F. Lyster of the Michigan 5th Reg. detached for the purpose – He has served constantly in the field since the beginning of the War, – and ~~much~~ some of the time had ~~of~~ charge of field hospitals and always with great acceptance.

Comparing the accessibility of Ann Arbor with Detroit, I would simply say that, so far all or nearly all the patients which have been removed from the western army to Detroit have been taken over the Mich. C. R. R. through Ann Arbor –

Commending this Memorial, which is to be forwarded with a letter by Senator Howard, to your attention and soliciting your aid –

I am very truly
Yours &c
Alonzo B. Palmer

was one of the most serious problems doctors had to contend with. It is mentioned frequently."

"Also there are many diaries of civil war surgeons in the collection."

Doctor Clarke took his MD degree from the University of Michigan in 1921. He was associated with Frank Wilson, MD as a research assistant in cardiology. Then he came to Detroit around 1924 and started the heart station at Ford Hospital.

"After a few years, I started my own practice and was cardiologist at Grace Hospital for many years. I brought the first, then modern electrocardiogram to Detroit, but it still was clumsy. An old, impractical machine had been in the office of Walter Wilson, Sr., but was little used."

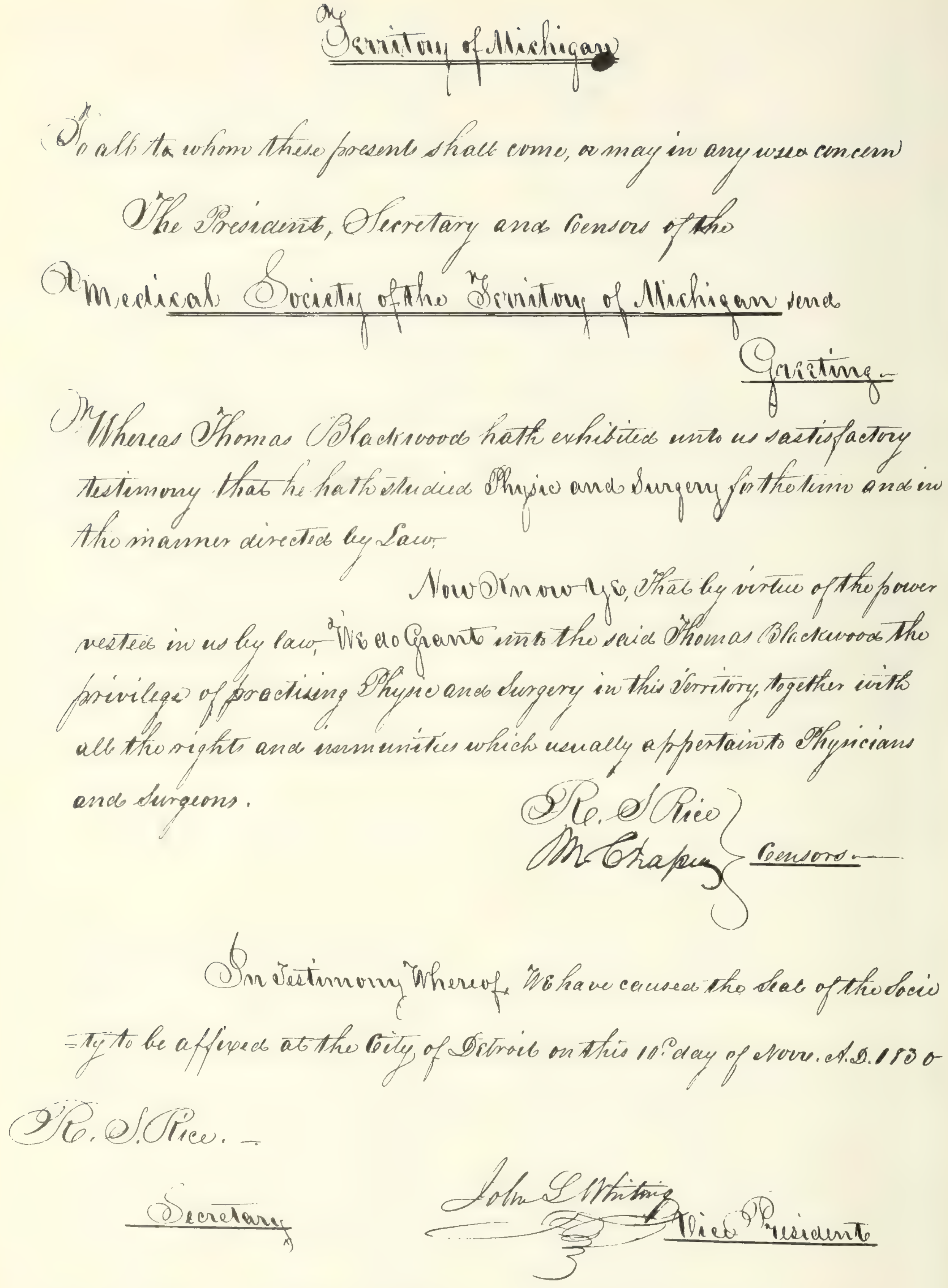
Doctor Clarke's two sons are also internists specializing in cardiology and are in practice with him in northwest Detroit.

He chose to give his historical collection to Central Michigan University because he thought that the central part of Michigan should have a historical research center and because Mount Pleasant was his home town.

Its availability has stimulated many students in the field of historical research, a factor that Doctor Clarke finds most rewarding.

While most of his own writing has been in the field of cardiology, Doctor Clarke has compiled two historical bibliographies which serve as a source for historians and especially rare book collectors.

He hopes in the future, however, to do some historical writing and make an even greater contribution to the story of Michigan's past.



Territory of Michigan

To all to whom these present shall come, or may in any wise concern

The President, Secretary and Censors of the Medical Society of the Territory of Michigan send

Greeting —

Whereas Thomas Blackwood hath exhibited unto us sastisfactory testimony that he hath studied Physic and Surgery for the time and in the manner directed by Law —

Now Know Ye, That by virtue of the power vested in us by law, We do Grant unto the said Thomas Blackwood the privilege of practising Physic and Surgery in this Territory, together with all the rights and immunities which usually appertain to Physicians and Surgeons.

R. S. Rice
M. Chapin
Censors —

In Testimony Whereof, We have caused the Seal of the Society to be affixed at the City of Detroit on this 10th day of Nov. A.D. 1830

R. S. Rice. —
Secretary

John L. Whiting
Vice President

The Medical Society of the Territory of Michigan issued this certificate on Nov. 10, 1830, to Thomas Blackwood, as he joined the organization's ranks. (From the Clarke collection.)

CALORIES / 7 oz. Serving*

Beef Broth	22	Vegetable	68
Consommé	29	Tomato	69
Chicken with Rice	43	Cream of Asparagus	70
Chicken Gumbo	48	Cream of Chicken	76
Chicken Noodle	54	Cream of Mushroom	115
Cream of Potato	58	Green Pea	116
Chicken Vegetable	60	Cream of Shrimp (Frozen)	132
Vegetable Beef	66	Bean with Bacon	133

In planning high or low calorie diets, Campbell's more than 50 different soups offer you a wide choice. And, most of Campbell's Soups contain a wide variety of ingredients that can serve as supplementary sources of many essential nutrients.

* From "Nutritive Composition of Campbell's Products" which gives values of important nutritive constituents of all Campbell's Products. For your copy, write to Campbell Soup Company, Dept. 536, Camden, New Jersey 08101.

here's a soup
for almost every patient and diet
.for every meal
and, it's made by Campbell

An excerpt from No. 1 of a new series from Searle*

"The Ecology of Birth Control"

75 million more Americans—what impact on health care?

Because of a declining birthrate in the United States—attributable in no small measure to the widespread use of contraceptives—our population in thirty years is expected to be *only* 280 million, while the world population is expected to double, reaching 7 billion.

But the word "only" has an ironic ring to ecologists who warn of cities resembling overcrowded, contaminated rat colonies, of respiratory and mental diseases reaching epidemic proportions and of a health-care community virtually overwhelmed by the burden.

The global consequences may be no less devastating. Ecologists estimate that every American has roughly fifty times the negative impact on the Earth's life-support systems of, say, a citizen of India. In these terms, adding 75 million Americans would be equivalent to adding 3.7 billion Indians to the world population.

**For the complete brochure, a* *others in the series as they appea* *please write to Searle or ask your Sea* *representative.* Explored in the for coming issues will be the role of bir control on family pressures and effects on the family; the influences poverty, ethnic factors and marit status; its role in illness, its gene implications and its effects on t emotional and behavioral life of t individual.

An original contribution
to the science of contraception

Demulen®

ach tablet contains 1 mg. ethynodiol diacetate/50 mcg. ethinyl estradiol

Demulen...for low estrogen and Searle's progestin...with its unsurpassed contraceptive effectiveness and low incidence of side effects...with simple "Sunday-starting" and patient-proof Compack® tablet dispenser.

Actions — Demulen acts to prevent ovulation by inhibiting the output of go-adotropins from the pituitary gland. Demulen depresses the output of both he follicle-stimulating hormone (FHS) and the luteinizing hormone (LH).

Special note: Oral contraceptives have been marketed in the United States ince 1960. Reported pregnancy rates vary from product to product. The ef-ectiveness of the sequential products appears to be somewhat lower than that f the combination products. Both types provide almost completely effective ontraception.

An increased risk of thromboembolic disease associated with the use of ormonal contraceptives has now been shown in studies conducted in both reat Britain and the United States. Other risks, such as those of elevated lood pressure, liver disease and reduced tolerance to carbohydrates, have ot been quantitated with precision.

Long-term administration of both natural and synthetic estrogens in sub-rimate animal species in multiples of the human dose increases the frequency f some animal carcinomas. These data cannot be transposed directly to man. he possible carcinogenicity due to the estrogens can be neither affirmed nor efuted at this time. Close clinical surveillance of all women taking oral con-aceptives must be continued.

Indication — Demulen is indicated for oral contraception.

Contraindications — Patients with thrombophlebitis, thromboembolic disor-ers, cerebral apoplexy or a past history of these conditions, markedly im-aired liver function, known or suspected carcinoma of the breast, known or uspected estrogen-dependent neoplasia and undiagnosed abnormal genital leeding.

Warnings — The physician should be alert to the earliest manifestations of rombotic disorders (thrombophlebitis, cerebrovascular disorders, pulmonary mbolism and retinal thrombosis). Should any of these occur or be suspected e drug should be discontinued immediately.

Retrospective studies of morbidity and mortality conducted in Great Britain nd studies of morbidity in the United States have shown a statistically sig-ificant association between thrombophlebitis, pulmonary embolism, and erebral thrombosis and embolism and the use of oral contraceptives. There ave been three principal studies in Britain [1-3] leading to this conclusion, and ne[4] in this country. The estimate of the relative risk of thromboembolism in e study by Vessey and Doll[3] was about sevenfold, while Sartwell and asso-iates[4] in the United States found a relative risk of 4.4, meaning that the users re several times as likely to undergo thromboembolic disease without evident ause as nonusers. The American study also indicated that the risk did not ersist after discontinuation of administration, and that it was not enhanced y long-continued administration. The American study was not designed to valuate a difference between products. However, the study suggested that ere might be an increased risk of thromboembolic disease in users of se-uential products. This risk cannot be quantitated, and further studies to con-rm this finding are desirable.

Discontinue medication pending examination if there is sudden partial or omplete loss of vision, or if there is a sudden onset of proptosis, diplopia or igraine. If examination reveals papilledema or retinal vascular lesions medi-ation should be withdrawn.

Since the safety of Demulen in pregnancy has not been demonstrated, it is ecommended that for any patient who has missed two consecutive periods regnancy should be ruled out before continuing the contraceptive regimen. the patient has not adhered to the prescribed schedule the possibility of regnancy should be considered at the time of the first missed period.

A small fraction of the hormonal agents in oral contraceptives has been dentified in the milk of mothers receiving these drugs. The long-range effect the nursing infant cannot be determined at this time.

Precautions — The pretreatment and periodic physical examinations should nclude special reference to the breasts and pelvic organs, including Papanicolaou smear, since estrogens have been known to produce tumors, some of them malignant, in five species of subprimate animals. Endocrine and possibly liver function tests may be affected by treatment with Demulen. Therefore, if such tests are abnormal in a patient taking Demulen, it is recommended that they be repeated after the drug has been withdrawn for two months. Under the influence of progestogen-estrogen preparations preexisting uterine fibromyomas may increase in size. Because these agents may cause some degree of fluid retention, conditions which might be influenced by this factor, such as epilepsy, migraine, asthma, cardiac or renal dysfunction, require careful observation. In breakthrough bleeding, and in all cases of irregular bleeding per vaginam, nonfunctional causes should be borne in mind. In undiagnosed bleeding per vaginam adequate diagnostic measures are indicated. Patients with a history of psychic depression should be carefully observed and the drug discontinued if the depression recurs to a serious degree. Any possible influence of prolonged Demulen therapy on pituitary, ovarian, adrenal, hepatic or uterine function awaits further study. A decrease in glucose tolerance has been observed in a significant percentage of patients on oral contraceptives. The mechanism of this decrease is obscure. For this reason, diabetic patients should be carefully observed while receiving Demulen therapy. The age of the patient constitutes no absolute limiting factor, although treatment with Demulen may mask the onset of the climacteric. The pathologist should be advised of Demulen therapy when relevant specimens are submitted. Susceptible women may experience an increase in blood pressure following administration of contraceptive steroids.

Adverse reactions observed in patients receiving oral contraceptives — A statistically significant association has been demonstrated between use of oral contraceptives and the following serious adverse reactions: thrombophlebitis, pulmonary embolism and cerebral thrombosis.

Although available evidence is suggestive of an association, such a relationship has been neither confirmed nor refuted for the following serious adverse reactions: neuro-ocular lesions, e.g., retinal thrombosis and optic neuritis.

The following adverse reactions are known to occur in patients receiving oral contraceptives: nausea, vomiting, gastrointestinal symptoms (such as abdominal cramps and bloating), breakthrough bleeding, spotting, change in menstrual flow, amenorrhea during and after treatment, edema, chloasma or melasma, breast changes (tenderness, enlargement and secretion), change in weight (increase or decrease), changes in cervical erosion and cervical secretions, suppression of lactation when given immediately post partum, cholestatic jaundice, migraine, rash (allergic), rise in blood pressure in susceptible individuals and mental depression.

Although the following adverse reactions have been reported in users of oral contraceptives, an association has been neither confirmed nor refuted; anovulation post treatment, premenstrual-like syndrome, changes in libido, changes in appetite, cystitis-like syndrome, headache, nervousness, dizziness, fatigue, backache, hirsutism, loss of scalp hair, erythema multiforme, erythema nodosum, hemorrhagic eruption and itching.

The following laboratory results may be altered by the use of oral contraceptives: hepatic function: increased sulfobromophthalein retention and other tests; coagulation tests: increase in prothrombin, Factors VII, VIII, IX and X; thyroid function: increase in PBI and butanol extractable protein bound iodine, and decrease in T^3 uptake values; metyrapone test and pregnanediol determination.

References: 1. Royal College of General Practitioners: Oral Contraception and Thrombo-Embolic Disease, J. Coll. Gen. Pract. *13*:267-279 (May) 1967. **2.** Inman, W. H. W., and Vessey, M. P.: Investigation of Deaths from Pulmonary, Coronary, and Cerebral Thrombosis and Embolism in Women of Child-Bearing Age, Brit. Med. J. 2:193-199 (April 27) 1968. **3.** Vessey, M. P., and Doll, R.: Investigation of Relation Between Use of Oral Contraceptives and Thromboembolic Disease. A Further Report, Brit. Med. J. 2:651-657 (June 14) 1969. **4.** Sartwell, P. E.; Masi, A. T.; Arthes, F. G.; Greene, G. R., and Smith, H. E.: Thromboembolism and Oral Contraceptives: An Epidemiologic Case-Control Study, Amer. J. Epidem. 90:365-380 (Nov.) 1969. 1A2

SEARLE
Where "The Pill" Began
G. D. Searle & Co., P.O. Box 5110, Chicago, Illinois 60680

Mylanta®
24 million hours a day.

Through the day, every day,
ulcer patients take
one million doses of Mylanta
for relief of ulcer pain.

Mylanta®
LIQUID/TABLETS
aluminum and magnesium hydroxides plus simethicone

Good taste = patient acceptance
Relieves G.I. gas distress*
Non-constipating

*with the defoaming action of simethicone

Stuart
PHARMACEUTICALS Pasadena, Calif. 91109
Division of Atlas Chemical Industries, Inc., Wilmington, Del. 19899

MSMS feels peer review organizations more important now than foundations

By Warren F. Tryloff
MSMS Director

(The following is the substance of a letter written by Mr. Tryloff to Mr. Carl G. King, executive secretary of the Saginaw County Medical Society. The letter expresses current MSMS thought on the subject of medical foundations.)

Foundations have been a magic word since their success in California for certain specialized purposes. The AMA has done a considerable amount of promoting of foundations. Some states have prepared against some local eventualities by forming foundations which can deliver medical care or take care of the paper work and peer review necessary for other insurance companies.

The Council was interested enough in a possible application of the California-style foundation to send Doctor Robert Leitch and Legal Counsel Stewart Kerr to a meeting last fall in Palm Springs, California which thoroughly explored the California situation.

Both men were impressed with what was being done out there. But both felt, I believe, that the situation is so different in Michigan that the application is not likely here. In California, for example, there is no state-wide insurance plan such as Blue Cross and Blue Shield (these are minor organizations out there) and the health insurance business is handled by several insurance companies like Occidental, Prudential and the Blues.

In Michigan, we have state-wide plans of Cross and Shield tied together by large industrial employers so that it really isn't possible for a county medical society foundation to say it will service a particular insurance plan for the people in its community, perform the peer review and handle the payment mechanisms. There just isn't that kind of competition here.

However, there are other possible purposes and objectives of a foundation. It could be a receptacle for profit-making ventures of a society and it could handle peer review such as the PRO proposals before the Federal Congress. It could represent physicians on Regional Medical Programs or Comprehensive Health Planning.

A meeting was called by the AMA in Columbus, Ohio on Jan. 23 and 24, for the purpose of reviewing the peer review situation. Six states sent representatives of the medical profession, Title 19 program, Blue Cross and Blue Shield and private insurance carriers. MSMS representatives received quite an education, but, more importantly, felt that there was an importance to peer review above anything else at this time. A foundation to handle the payment mechanism for health insurance carriers seem of subsidiary interest at this time.

The real possibility exists that peer review will be thrust upon us from Washington and we won't be prepared to meet the challenge.

I think all of us believe that there is urgency in creating a viable state-wide Health Review Organization (or some such), formed as an outside corporation. It could be called a foundation. We happen to dislike the term foundation because of the implication that it is non-profit with social objectives.

Recently Doctor Prophater, who is chairman

(Continued on Page 430)

MSMS Highlights 15 years ago

—The Journal of MSMS was rated 87.5 in a scale of 100 in an evaluation of the various medical journals serviced by the State Medical Journal Advertising Bureau. Its rating placed it among the top 11 listed (no journal rated more than 90 points).

—At "an historic luncheon" held in Wayne County Medical Society Headquarters, the lease was signed between the WCMS and the Detroit Board of Education giving the Society the privilege of constructing a new building on the property of the Wayne State University Center.

—The Tuberculosis death rate reached a new low of 6.6 per 100,000 population.

—The MSMS exhibit at the State Fair in Detroit asked visitors to try to name the number of practicing MDs in Michigan. Mr. Elwyn I. Evans of Clawson came closest to the correct figure of 8,214 with his estimate of 8,206.

Announcing the calculated success

Euthroid® (liotrix) puts your patient here*:

*in the euthyroid zone of the new Free Thyroxine Index** w full replacement dos

thyroid (liotrix) yields reliable, easily interpreted test values

ause Euthroid incorporates both active fractions of endogenous thyroid—T_4 and T_3—it rcomes the need for special interpretation of thyroid function test values.

reover, whatever the therapy used, ordinary tests can be thrown off by such factors as ormal thyroid-binding protein levels, oral contraceptive use and pregnancy. A new hod of assessment—the Free Thyroxine Index (FTI)**—helps eliminate these errors. By ting measurements of total and protein-bound T_4, the FTI indicates your patient's status cisely. And with Euthroid, the precision of your diagnosis is matched by the precision our therapy.

osest in clinical effect to human endogenous thyroid

hroid provides both T_4 and T_3 in the optimum *oral* ratio of 4:1 by weight and in proper amounts, closely simulating endogenous thyroid in clinical effect. Dose response can ssessed unequivocally through use of the FTI—and because we want you to put Euthroid e test *with this most rigorous of tests*, we offer you an aid to easier determination:

e Euthroidex™ calculator— the "new math" of thyroid laboratory tests

longer does FTI determination require you to perform lengthy mathematical exercises. the Euthroidex calculator—another first from Warner-Chilcott—you compute it easily ccurately... almost instantly. Send for yours now.

yroid therapy, Euthroid offers you the calculated success—and the calculator to go with it.

To request your Euthroidex™ calculator (with booklet explaining its use and rationale for the FTI), just write "Euthroidex" on your imprinted card, prescription blank or stationery, and mail to
Warner-Chilcott,
Morris Plains,
N.J. 07950.

the first synthetic to replace both active fractions of endogenous thyroid

Euthroid® (liotrix)

sodium levothyroxine (T_4)
sodium liothyronine (T_3)

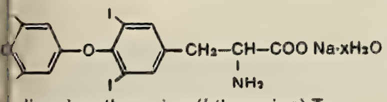
k, F., and Horn, D. B.: Assessment of thyroid function by ombined use of the serum protein-bound iodine and resin uptake of triiodothyronine, J. Clin. Endocrinol. 25:39 (Jan.) 1965.

---

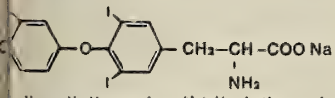
roid® (liotrix)

ion: Federal law prohibits dispensing ut prescription.

roid is synthetic microcrystalline sodium thyroxine (T_4) USP and synthetic microtalline sodium liothyronine (T_3) USP comd in a constant 4:1 ratio.



odium levothyroxine (*l*-thyroxine) T_4



odium liothyronine (*l*-triiodothyronine) T_3

ons: Euthroid provides replacement ther for the thyroactive material normally lied by the human thyroid. The normal oid gland produces and stores thyroulin, the active components of which are metabolically active hormones: *l*-thyne and liothyronine. Euthroid (liotrix) pros a combination of these hormones in ied, synthetic form, supplied in a con 4:1 ratio in order to simulate as closely ossible the physiologic and metabolic ts of normal endogenous thyroid secre-

contrast with the individual synthetic, abolically active hormones, Euthroid will lly produce normal results for PBI, T_3, other thyroid function tests—consistent clinical progress—when persons with ogenous thyroid deficiencies are made yroid. Sodium liothyronine (T_3) acts more dly and for a shorter period of time than arations of biological origin. Custom, its use as a single agent produces inopriately decreased PBI values. Sodium thyroxine (T_4), on the other hand, is more ly bound by plasma protein fractions and omewhat slower acting than sodium yronine (T_3); its use as a single agent s to produce inappropriately elevated values. Euthroid, with its unvarying 4:1 of T_4/T_3, permits interpretation of apriate laboratory tests consistent with the clinical status of the patient.

ations: Euthroid (liotrix) provides thyroid acement therapy in all conditions of inquate production of thyroid hormones, namely:

1) Hypothyroidism, including cretinism and myxedema.
2) Simple (nontoxic) goiter.
3) Subacute or chronic thyroiditis including Hashimoto's disease.
4) Prevention of goiter in hyperthyroid patients undergoing treatment with thiouracil derivatives.
5) Usage in patients who may manifest intolerance to thyroid products of animal origin.

Contraindications: Acute myocardial infarction, adrenal insufficiency, hypersensitivity to any component of this drug.

Warnings: Liotrix should not be used in the presence of cardiovascular disease unless thyroid replacement therapy is clearly indicated. If the latter exists, low doses should be instituted (Euthroid-1/2 or Euthroid-1) and increased by the same amount in increments at 2-week intervals. This demands careful clinical judgment.

Morphologic hypogonadism and nephroses should be ruled out and adrenal deficiency due to hypopituitarism corrected before liotrix therapy is started.

If hypothyroidism and adrenal insufficiency exist concomitantly, cortisone or similar steroids should be given at dose levels sufficient to correct the adrenal insufficiency before attempting replacement therapy with thyroid hormones.

Likewise, the possibility of alterations in the prothrombin time must be considered and closely monitored in patients on anticoagulant therapy.

Myxedematous patients are very sensitive to thyroid hormones, and dosage should be started at a very low level and increased gradually.

Precautions: Hypothyroid patients are especially sensitive to thyroid preparations, and those with severe hypothyroidism may be unusually so.

Initiation of thyroid replacement therapy in patients with diabetes must be carefully monitored because of potential fluctuation in daily insulin or oral hypoglycemic requirements.

As with all thyroid preparations, this drug will alter the results of thyroid function tests.

Adverse Reactions: Overdosage or too rapid increase in dosage of thyroid preparations can produce signs and symptoms of hyperthyroidism, such as menstrual irregularities, nervousness, cardiac arrhythmias, and angina pectoris.

Dosage and Administration: Initial dosage should be low and gradually increased at 2-week intervals until the desired clinical response is obtained.

Laboratory criteria of euthyroidism include a PBI of 3.5 to 8 mcg; T_3, T_4, and BEI tests are useful.

For most patients, a single daily dose of Euthroid-1, -2, or -3 will maintain euthyroidism. Transfer of a patient from a maintenance dose of another thyroid preparation to Euthroid can usually be effected smoothly. See table for initiating therapy or converting from other thyroid preparations.

Euthroid (liotrix)		Approximate Equivalents Natural	Synthetic	
Tablet	T_4*/T_3** mcg	Thyroid USP	T_4*	T_3**
Euthroid-½ pale orange	(30/7.5)	½ grain	.05 mg	12.5 mcg
Euthroid-1 light brown	(60/15)	1 grain	.1 mg	25.0 mcg
Euthroid-2 violet	(120/30)	2 grains	.2 mg	50.0 mcg
Euthroid-3 gray	(180/45)	3 grains	.3 mg	75.0 mcg

*T_4 sodium levothyroxine (*l*-thyroxine)
**T_3 sodium liothyronine (*l*-triiodothyronine)

Dosage for cretinism or severe hypothyroidism in children is the same as for adults with myxedema. Eventual maintenance dosage in the growing child may be higher than in the adult.

Overdosage: *Symptoms*—Headache, instability, nervousness, sweating, tachycardia, and unusual bowel motility. Angina pectoris or congestive heart failure may be induced or aggravated. Shock may develop. Massive overdosage may result in symptoms resembling thyroid storm; chronic excessive dosage will produce the signs and symptoms of hyperthyroidism.

Treatment—Shock—Supportive measures should be utilized. Treatment of unrecognized adrenal insufficiency should be considered.

Supplied: Square W/C monogrammed tablets of four potencies, each identified by a different color (see table); bottles of 100 and 1000.

WARNER-CHILCOTT Morris Plains, N.J. 07950 of the MSMS Utilization Review Committee, had a meeting of his group to discuss how MSMS should react to the matter of improving peer review within the state. We have the bare bones of a peer review system in the Regional Medical Advisory Committee network. Doctor Prophater's committee has challenged a sub-committee to come up with some more detailed guidelines for the operation of peer review within this system, to add flesh to the bones.

Once the committee adopts this, we think that it will recommend we go a step further and investigate the possibility of proposing a state-wide corporation to handle peer review for Title 18 and Title 19 programs, Blue Shield business and commercial carriers. At the moment we are interested in the Hennepin County (Minnesota) foundation which charges the carriers a certain percentage of their premium business in order to handle their peer review for them.

Doctor Prophater and I have thought that if we did recommend a state-wide health review organization (foundation) it should be constructed so that it would be easy to adapt it to whatever federal regulations come out of this Congress having to do with peer review. I think that we can guess most of the larger elements of any PRO or PSRO program which may become law.

One of the features that seems to be inherent in Washington thought is that review groups should not be smaller than 300 persons. This gives us the idea that a state-wide health review organization is the right route and that the HRO could, by letter of agreement, assign certain peer review responsibilities to regional committees composed of at least 300 doctors. These could be grouped either by counties or by councilor district or by other arbitrary method. Thus it would not be necessary for 84 counties to form 84 different foundations. It seems that there ought to be a central peer review organization working closely with regional medical review organizations.

We still are not ignoring the idea of another "foundation" to take care of other needs. We are giving continual thought to the objectives and purposes of a different kind of foundation exclusive of peer review that might serve MSMS in the future. We have not yet defined these purposes and objectives, however.

You need MDPAC

By Brooker L. Masters, MD
Fremont

Those of us who were priviledged to attend the recent AMA-AMPAC Workshop in Washington came away with this definite conclusion: there will be a form of national health insurance within the next two years. It is fairly certain that only rhethoric will occur during 1971—and there will be a great deal of that.

Both parties want this issue for a campaign focus in 1972 and are preparing in just that manner. Both are going to make promises and the 93rd Congress will be elected with a mandate to deliver such a program. Therefore, it is almost axiomatic that who is elected in 1972 will determine the thrust and extent of a revised health care format that will influence medical care for the remaining decades of the 20th Century.

There is a definite threat to the final outcome when both parties are competing for the vote in such a popular issue. Too much might be promised; compromises may be ignored.

So it is absolutely vital that all physicians get involved and *NOW*. The answer as to "how" seems very logical: AMPAC. We were told by every speaker at the workshop that AMPAC is an effective organization. Politicians are impressed by what doctors *can* do when they are organized politically. And AMPAC is our organized political tool.

Naturally, the name of this game is money. In 1970, there were 1,961 Michigan doctors who were members of MDPAC (Michigan's chapter of AMPAC, in case you wonder) at $25 each. We're doing pretty good, too. But really it should be more like seven or eight thousand members, for every member of MSMS will be directly affected by the legislation passed by the 93rd Congress.

More importantly a significant number should become sustaining members of MDPAC, *at $100 per year*. There just is no question but that this is the best investment any of us can make; $2 per week is what this amounts to. And we should remember that almost all union members contribute $1 per week to their political coffers—every year. Surely our needs are at least as critical at this point in time!

That there will be national health insurance is a certainty; the form it will take is yet to be worked out. A combination of AMA's MediCredit and President Nixon's plan seems a logical bet. But no one can be sure. It is in this area that we still have a chance to be heard. To ignore the issue and keep our hands out of the decision-making would be the most serious of defaults.

MDPAC and AMPAC do work. Are you a member? Are you a worker? Why not become a sustaining member?

(Continued on Page 436)

A
BUILDING BLOCK
TO RECOVERY

"Welcome back, Ann"
As adjunctive therapy
DOUBLE STRENGTH
Orenzyme®
Bitabs
One tablet q.i.d.
Trypsin 100,000 N.F. Units, Chymotrypsin: 8,000 N.F. Units; equivalent in tryptic activity to 40 mg. of N.F. trypsin
Reduces swelling
Hastens healing
Speeds recovery
trauma
One tablet q.i.d.

Indications: When used as adjunctive therapy for the rapid resolution of inflammation and edema, good results have been obtained in:
☐ Accidental Trauma ☐ Postoperative Tissue Reactions.
Other conventional measures of treatment should be used as indicated. In infection, appropriate anti-infective therapy should be given.

Contraindications: ORENZYME BITABS should not be given to patients with a known sensitivity to trypsin or chymotrypsin.

Precautions: It should be used with caution in patients with abnormality of the blood clotting mechanism such as hemophilia, or with severe hepatic or renal disease. Safe use in pregnancy has not been established.

Adverse Reactions: Adverse reactions with ORENZYME have been reported infrequently. Reports include allergic manifestations (rash, urticaria, itching), gastrointestinal upset and increased speed of dissolution of animal-origin surgical sutures. There have been isolated reports of anaphylactic shock, albuminuria and hematuria. Increased tendency to bleed has also been reported but, in controlled studies, it has been seen with equal incidence in placebo-treated groups. (See Precautions.) It is recommended that if side effects occur medication be discontinued.

Dosage: One tablet q.i.d.

THE NATIONAL DRUG COMPANY
DIVISION OF RICHARDSON-MERRELL INC.
PHILADELPHIA, PENNSYLVANIA 19144
TRADEMARK BITABS U S PATENT NO. 3,004,893 9/70 0-009A 161

Orenzyme® Bitabs

Trypsin: 100,000 N.F. Units, Chymotrypsin: 8,000 N.F. Units; equivalent in tryptic activity to 40 mg. of N.F. trypsin

The causes of vaginitis are multiple

Trichomonads . . . monilia . . . bacteria

You can depend on AVC—comprehensive therapy that combats all three major vaginal pathogens, alone or in combination.

AVC

Cream (aminacrine hydrochloride 0.2%, sulfanilamide 15.0%, allantoin 2.0%)

Suppositories (aminacrine hydrochloride 0.014 Gm., sulfanilamide 1.05 Gm., allantoin 0.14 Gm.)

Contraindications: Known sensitivity to sulfonamides.

Precautions/Adverse Reactions: The usual precautions for topical and systemic sulfonamides should be observed because of the possibility of absorption. Burning, increased local discomfort, skin rash, urticaria or other manifestations of sulfonamide toxicity are reasons to discontinue treatment.

Dosage: One applicatorful or one suppository intravaginally once or twice daily.

Supplied: Cream—Four-ounce tube with or without applicator. Suppositories—Box of 12 with applicator.

TRADEMARK: AVC AV-104 2/71 Y-149

THE NATIONAL DRUG COMPANY
DIVISION OF RICHARDSON-MERRELL INC
PHILADELPHIA, PENNSYLVANIA 19144

AVC
The treatment is singular

U.S.S.R.
CHINA
INDIA
SAIGON
INDONESIA
AUSTRALIA

"Around the World in 80 Days"...

. . .An expense-paid trip with one hitch --
a 60-day hitch in a South Viet Nam civilian hospital
delivering vitally needed medical care to the people
of South Viet Nam.

American physicians are urgently needed,
especially general practitioners, general surgeons,
internists, ophthalmologists, orthopedic surgeons,
pediatricians, and preventive medicine specialists.

For further information please write to:

Program Director
Volunteer Physicians for Viet Nam
American Medical Association
535 North Dearborn Street
Chicago, Illinois 60610

in stable adult diabetes, if diet alone fails...

start with DBI®-TD (phenformin HCl)

timed-disintegration capsules 50 mg.

A Distinctive Oral Hypoglycemic

---

a biguanide... not a sulfonylurea

Lowers elevated blood sugar without increasing endogenous insulin secretion.

Probably, secondary to its hypoglycemic effect, decreases insulin oversecretion. This may help to reduce lipogenesis and facilitate lipolysis, which may account for the clinically reported loss of excess body weight and lowering of elevated serum cholesterol levels in overweight, hypercholesteremic, stable adult diabetics unresponsive to diet alone.

DBI®-TD
(phenformin HCl)

timed-disintegration capsules 50 mg.

lowers elevated blood sugar

How to prescribe DBI®-TD (phenformin HCl)

To start with DBI-TD

Week 1	1 capsule with breakfast may be effective, or a second capsule may be given with the evening meal.
Week 2	Continue effective DBI-TD dosage. If necessary, add an additional capsule to the A.M. or P.M. dose.
Thereafter	Continue effective DBI-TD dosage.

To transfer from sulfonylurea therapy to DBI-TD alone: The first week, withdraw sulfonylurea; start with DBI-TD as indicated in the chart.

To transfer from sulfonylurea therapy to combined therapy with DBI-TD: The first week, continue dosage of sulfonylurea; add DBI-TD as indicated in the chart. When effective regulation of diabetes is attained, sulfonylurea may be reduced and/or withdrawn.

ndications: Stable adult diabetes mellitus; sulfonylurea fail-
res, primary and secondary. **Contraindications:** Diabetes mel-
tus that can be regulated by diet alone; juvenile diabetes that
uncomplicated and well regulated on insulin; acute compli-
ations of diabetes (metabolic acidosis, coma, infection, gan-
rene); surgery; severe hepatic disease; renal disease with
remia; cardiovascular collapse, after disease states associated
ith hypoxemia. **Warning:** Use during pregnancy is to be avoided.
ntil adequate data on the effects of DBI on the human fetus
re available, such use can be considered experimental. **Pre-
autions: Starvation Ketosis,** which must be differentiated
om "insulin lack" ketosis, and is characterized by ketonuria
spite of relatively normal blood and urine sugar, may result
om excessive DBI therapy, excessive insulin reduction or
sufficient carbohydrate intake. Adjustment of DBI-TD or
sulin dosage, or supplying carbohydrates, alleviates this
ate. DO NOT GIVE INSULIN WITHOUT FIRST CHECKING
LOOD AND URINE SUGARS. **Lactic Acidosis:** DBI is not rec-
mmended in the presence of azotemia or in any clinical situa-
on that predisposes to sustained hypotension that could lead
lactic acidosis. To differentiate lactic acidosis from ketoacido-
s, it is recommended that periodic determinations of ketones in the blood and urine be made in diabetics previously stabilized on DBI, or DBI and insulin, who have become unstable. If electrolyte imbalance is suspected, periodic determinations should also be made of electrolytes, pH and the lactate-pyruvate ratio. DBI should be withdrawn and insulin, when required, and other corrective measures instituted immediately upon the appearance of any metabolic acidosis. **Hypoglycemia:** Although hypoglycemic reactions are rare when DBI is used alone, every precaution should be observed during the dosage adjustment period particularly when insulin or a sulfonylurea has been given in combination with DBI. **Adverse Reactions:** Principally gastrointestinal, occurring more often at higher dosage levels; unpleasant metallic taste, continuing to anorexia, nausea and, less frequently, vomiting and diarrhea. Reduce dosage at first sign of these symptoms. In case of vomiting, DBI should be immediately withdrawn. Although rare, urticaria and gastrointestinal symptoms following excessive alcohol intake have been reported. **Dosage:** 1 to 3 DBI-TD 50 mg. capsules daily. **FSN 6505-724-6331. Also Available:** DBI tablets 25 mg. **Supplied:** Bottles of 100 and 1000.

USV PHARMACEUTICAL CORP., Tuckahoe, N.Y. 10707 **USV**

A plea for unity

(The following excerpts from an editorial that appeared in a recent **Detroit Medical News** *are reprinted with the permission of the Wayne County Medical Society publication committee and the author.)*

By John G. Slevin, MD
Detroit

This is no time to drop AMA membership. We need a united medical front to impress our ideas on the Congress. The AMA is the only organization in existence which represents the majority of MDs. We MUST work through the AMA.

If you read *Michigan Medicine* and *Detroit Medical News* you know who are Michigan's Delegates to the AMA. Dr. Donald Sweeny is the Chairman of this Delegation. Contact him if you have ideas you want forwarded to AMA. Incidentally, if all MDs in Michigan were members of AMA, we would be entitled to three additional AMA Delegates.

Unfortunately, many of those most critical of the AMA and organized medicine in general, will not read this message. Hence, we urge all MDs who do read this to call this article to the attention of their confreres. Let us learn a lesson from union labor who have demonstrated by their solidarity that they reach their goals. The medical profession, if united, can write the National Health Insurance law. As Wilbur Cohen told WCMS last fall, we must do so.

Unfortunately, MDs are not a cohesive group, like organized labor. Too many physicians give only lip service to organized medicine. In our own WCMS only about 300 of nearly 3,000 members actually devote any time or effort to the Society's affairs. Even at election time about 1,000 members fail to vote. Yet, these are the same people who are loudest in their criticism of organized medicine.

Constructive criticism is always welcome and needed. Those of us who serve as officers and on committees of WCMS or MSMS do not have all the answers.

We are open to new ideas. At this point in time, especially, when national health insurance is under discussion, innovative thought is essential. We would like to know,

What do you think?

Welfare gone mad

(The following article is reprinted from the Wall Street Journal editorial page.)

"The organized welfare state has gone mad." So observed Gunnar Myrdal, the noted economist, in commenting on the rash of white-collar strikes that has been disrupting Sweden for the past several weeks.

The strikes and/or lockouts involve civil servants, army officers, teachers and judges. They are demanding huge pay increases to compensate for inflation and taxes—Sweden's are among the highest in the world. The inflation and the taxes are part of the price for the country's comprehensive welfare state.

At the same time these mostly well-educated, relatively well-heeled strikers are angry at the pay raises that have gone to industrial workers in recent years. In the words of a *New York Times* dispatch, they "are worried that the government's promise to narrow the wage gap between workers will keep the white-collar college graduates locked in financially and, perhaps more important, without the class status, the privileges and the relative salary positions that once separated a professor from an industrial worker."

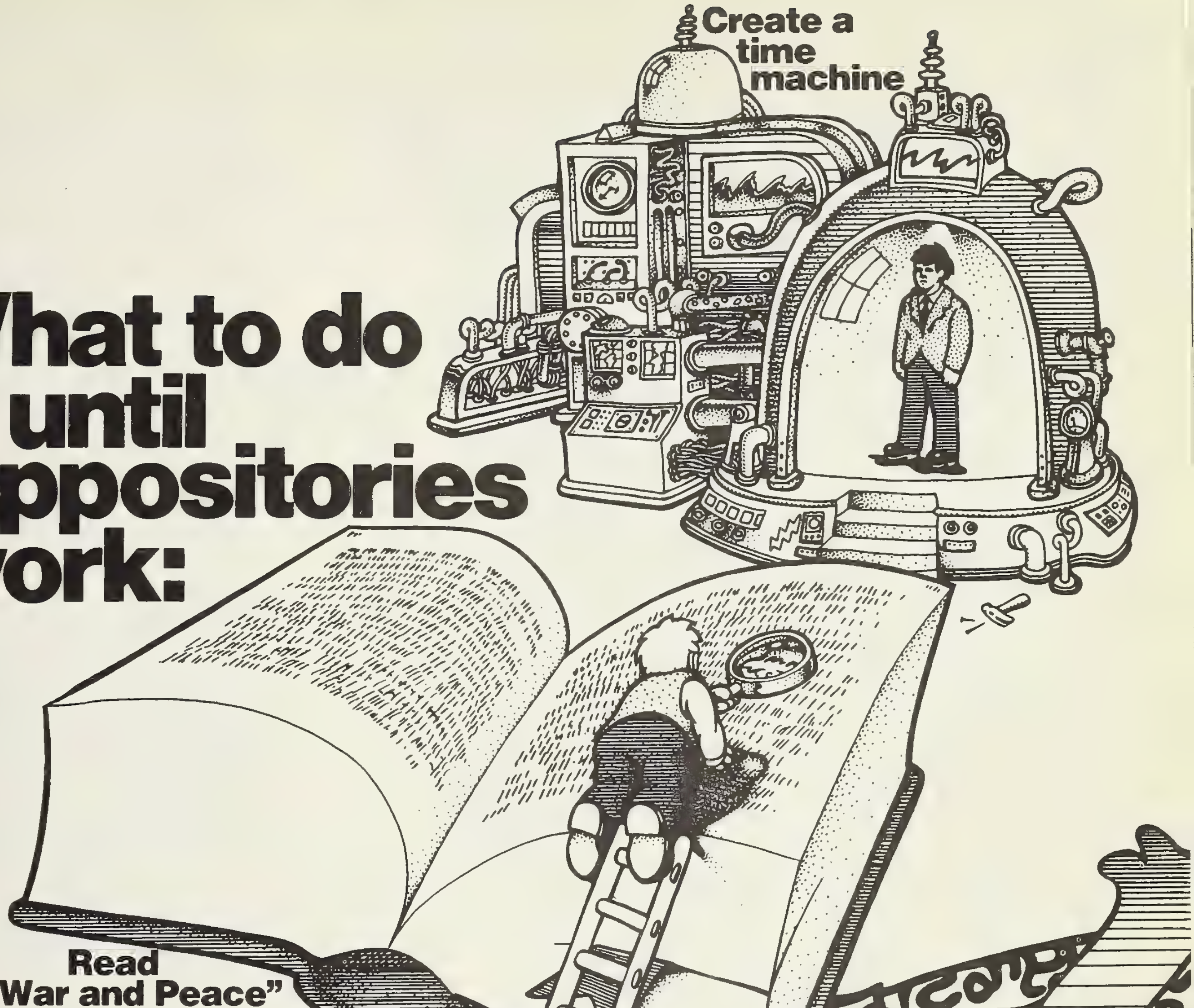
Now this spectacle is not without its ironic overtones. For a long time our liberal friends here at home have disparaged the United States by reference to Sweden, with its rather high standard of living coupled with an almost total absence of poverty and racial conflict. (Of course the nation is ethnically homogeneous by comparison with the U.S., and there have been problems, like an acute housing shortage, even before the present troubles.)

So those who advocate a full-blown welfare state for America should mark well the chaos such a state, with all its government "planning," is capable of creating.

True, the U.S. is still quite a way from Swedish-style welfarism. Yet we do have persistent inflation, our taxes are oppressive and only a naive person would suppose that the total tax burden will do anything but grow in the years ahead. And in the sense of our monstrously swelling rolls of people on public relief, we are rapidly becoming something of a welfare state.

For all its neatness, for all its seeming logic, the welfare-state concept has always been a delusion. The human animal is not so simply motivated and manipulated. The imperfections of our individual-oriented society are manifest; they are far preferable to the deadening—and finally divisive—sway of statism.

What to do until suppositories work:



Actually, on the average, evacuant suppositories take about an hour to work.[1-3] Sometimes two.[4] Sometimes more.[3] Also, suppositories can be ineffective in up to 38% of patients,[5] and not infrequently produce smarting, burning and tenesmus.[6]

Alternative to the long unpleasant wait: FLEET® ENEMA.

FLEET ENEMA works within 2 to 5 minutes without pain or spasm. FLEET ENEMA induces a physiological pattern of evacuation, unlike purgatives and laxatives that may liquefy the stool. FLEET ENEMA avoids the irritation common with soapsuds enema. And FLEET ENEMA is leakproof: a rubber diaphragm at the base of the prelubricated tube prevents seepage and controls the rate of flow, assuring comfortable administration.

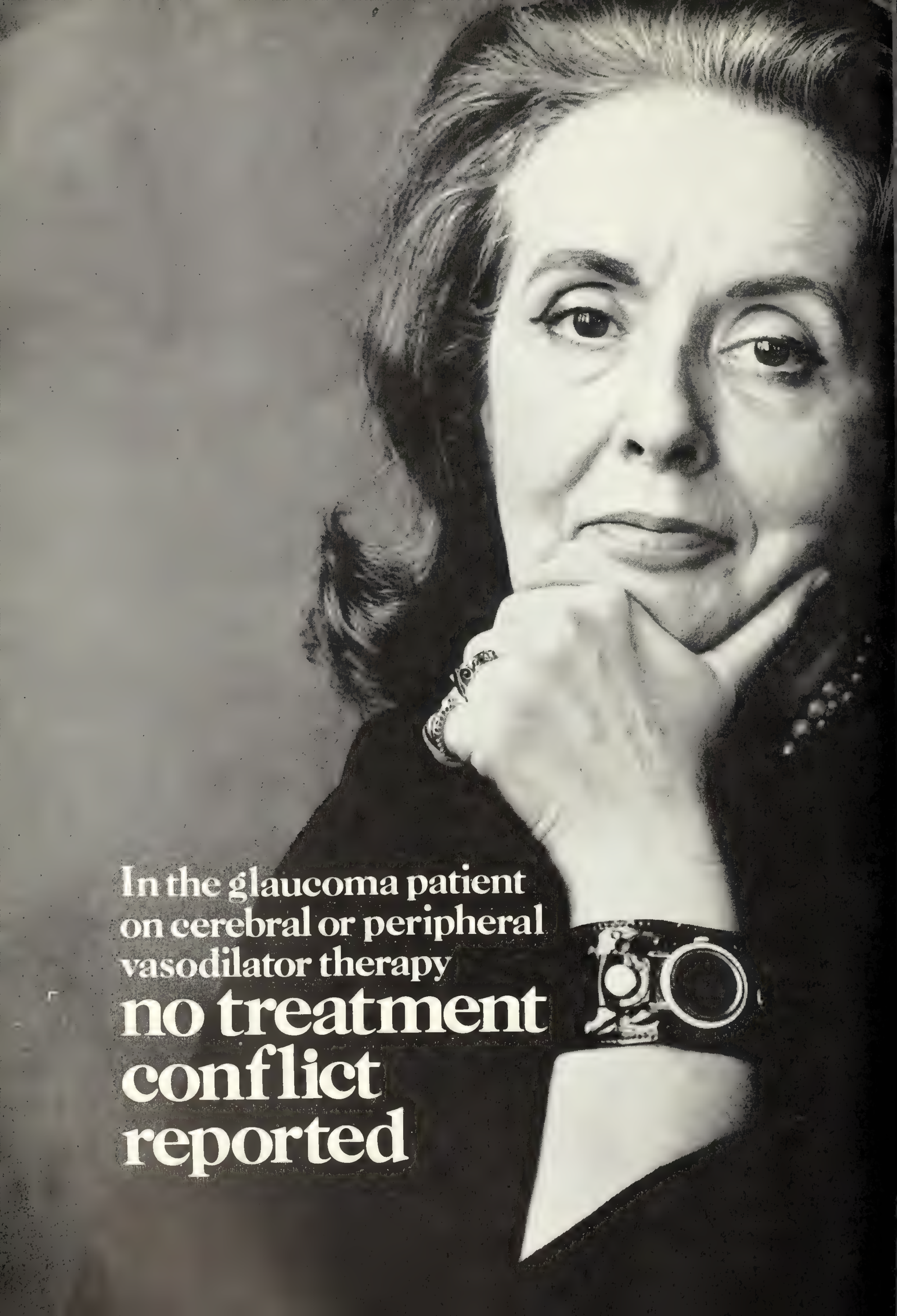
FLEET ENEMA. Regular and pediatric. Both completely disposable—like suppositories, only better. Much better.

Fleet
pharmaceuticals

C. B. FLEET CO., INC.
Lynchburg, Va. 24505

Warning: Frequent or prolonged use of enemas may result in dependence. Take only when needed or when prescribed by a physician. Do not use when nausea, vomiting or abdominal pain is present.
Caution: Do not administer to children under two years of age unless directed by a physician.

References: 1. Blumberg, N.: Med Times 91:45, Jan., 1963. 2. Sweeney, W. J., III: Amer J Obstet Gynec 85:908, Apr. 1, 1963. 3. Weinsaft, P.: J Amer Geriat Soc 12:295, Mar., 1964. 4. Baydoun, A. B.: Amer J Obstet Gynec 85:905, Apr. 1, 1963. 5. Feder, I. A., Flores, A. and Weiss, J.: Amer J Gastroent 33:366, Mar., 1960. 6. Smith, J. J. and Schwartz, E. D.: Western J Surg 72:177, May-June, 1964.


In the glaucoma patient
on cerebral or peripheral
vasodilator therapy
no treatment
conflict
reported

VASODĪLAN®

(ISOXSUPRINE HCl)

the compatible vasodilator

- no reported increase of intraocular pressure.
- conflicts have not been reported with diuretics, corticosteroids, antihypertensives or miotics.
- complications in the treatment of coronary insufficiency, hypertension, diabetes, peptic ulcer or liver disease have not been reported.

In fact, there are no known contraindications in recommended oral doses other than it should not be given in the presence of frank arterial bleeding or immediately postpartum.

Although not all clinicians agree on the value of vasodilators in vascular disease, several investigators[1-4] have reported favorably on the effects of isoxsuprine. Effects have been demonstrated both by objective measurement[2,4] and observation of clinical improvement.[1,3] **Indications:** Cerebrovascular insufficiency, arteriosclerosis obliterans, diabetic vascular diseases, thromboangiitis obliterans (Buerger's disease), Raynaud's disease, postphlebitic conditions, acroparesthesia, frostbite syndrome and ulcers of the extremities (arteriosclerotic, diabetic, thrombotic). **Composition:** VASODĪLAN tablets, isoxsuprine HCl 10 mg. and 20 mg. **Dosage:** Oral—10 to 20 mg. t.i.d. or q.i.d. **Contraindications and Cautions:** There are no known contraindications to recommended oral dosage. Do not give immediately postpartum or in the presence of arterial bleeding. **Side Effects:** Occasional palpitation and dizziness can usually be controlled by dosage reduction. Complete details available in product brochure from Mead Johnson Laboratories. **References:** 1. Clarkson, I. S., and LePere, D. M.: Angiology *11*:190-192 (June) 1960. 2. Horton, G. E., and Johnson, P. C., Jr.: Angiology *15*:70-74 (Feb.) 1964. 3. Dhrymiotis, A. D., and Whittier, J. R.: Curr. Ther. Res. *4*:124-128 (April) 1962. 4. Whittier, J. R.: Angiology *15*:82-87 (Feb.) 1964.

Mead Johnson
LABORATORIES

© 1971 MEAD JOHNSON & COMPANY • EVANSVILLE, INDIANA 47721 U.S.A. 184571

INSOMNIA
SEDATE EFFECTIVELY

With QUĪ-A-ZONE – you can sedate effectively. A balanced combination of short, intermediate, and long-acting barbiturates (totaling 100 mg.) in a rapidly disintegrating tablet — sedation is provided within a few minutes . . . followed by sound restful sleep . . . usually without morning hangover. The four barbiturates in QUĪ-A-ZONE have dual channels of elimination (renal and hepatic) to lessen metabolic burden, decrease barbiturate retention, and minimize depression.

QUĪ-A-ZONE™

Each rapidly-disintegrating tablet contains 25 mg. secobarbital, 25 mg. pentobarbital, 25 mg. butabarbital, and 25 mg. phenobarbital. Bottles of 100.
Usual Adult Dose: 1 to 2 tablets before retiring.
PRECAUTION: Should not be administered to patients sensitive to barbiturates, or in cases of known previous addiction. Warning: May be habit forming.

W-C PRECISION PHARMACEUTICALS

SEND FOR SAMPLES.
WALKER, CORP & CO., INC.
Syracuse, New York 13201

Michigan Mediscene

April 30-May 2—Annual meeting, Michigan State Medical Assistants Society, Weber's Motor Inn, Ann Arbor, contact: Mrs. Patricia Austin, MSMAS president, 216 Michigan Theater Building, Ann Arbor, 48108

May 2—Board meeting, Michigan Academy of General Practice, 2 p.m., MSMS headquarters, contact: James F. Dooley, MD, president, 3210 S. Dort Highway, Flint, 48507

May 6—Annual MSMS Medicine-Religion Workshop for chairmen of county medical society medicine-religion committees and clergymen, 3 p.m., MSMS headquarters, contact: Winslow G. Fox, MD, 715 N. University, Ann Arbor, 48104

May 12—Wayne State University School of Medicine Alumni Clinic Day, Sheraton-Cadillac Hotel, Detroit, theme: "Environmental Health, with emphasis on the medical aspects of the ecology," contact: Alan J. Hitsky, Information Services, Wayne State University, Detroit, 48202

May 19—Michigan Allergy Society Annual Meeting, Ann Arbor, contact: John Lesesne, MD, president, MAS, 17770 Mack Ave., Grosse Pointe, 48224

May 19—Michigan Doctors Political Action Committee dinner meeting, 6 p.m., MSMS Headquarters, contact: Louis R. Zako, MD, MDPAC chairman, 7720 Allen Road, Allen Park, 48101

May 19-21—Michigan Public Health Association Annual Meeting, Pantlind Hotel, Grand Rapids, contact: William Swanson, executive director, MPHA, 403 Seymour, Lansing, 48914

May 20—25th annual Michigan Health Congress, 9 a.m. to 4:30 p.m., Goodrich Chapel, Albion College, Albion, contact: John A. Doherty, director, Michigan Health Council, 712 Abbott St., East Lansing, 48823

May 20-21—Annual summer meeting of MSMS Maternal and Perinatal Health Committee, Kellogg Biological Station, Gull Lake, contact: Miss Helen Schulte, MSMS headquarters

May 21-23—Michigan Kidney Foundation 10th annual Kidney Disease Symposium, Kellogg Center, East Lansing, contact: Martin Jones, MD, 2909 E. Grand River, Lansing

May 20-21—14th annual clinic days, Children's Hospital of Michigan, contact: Paul V. Woolley, Jr., MD, clinic chairman

May 22—16th annual all-day scientific session, Michigan Society of Anesthesiologists, Sheraton-Cadillac Hotel, Detroit, contact: Ralph E. Bauer, MD, secretary-treasurer, MSA, Henry Ford Hospital, Detroit, 48202

May 22-23—Michigan Society of Medical Technologists, annual and educational meeting, Kellogg Center, East Lansing, contact: Robert Brooks, School of Medical Technology, MSU, East Lansing, 48823

May 24-28—Clinical Endocrinology: Physiological Basis for Current Diagnostic and Therapeutic Procedures, American College of Physicians, U-M Medical Center, Ann Arbor, contact: Jerome W. Conn, MD, course director

May 26—MSMS Council, 9:30 a.m., MSMS headquarters, East Lansing, contact: Warren F. Tryloff, MSMS director

May 26-28—Medical Staff - Trustee - Administrator Forum, Boyne Mountain Lodge, contact: H. Allan Barth, executive director, Michigan Hospital Association, 2213 E. Grand River, Lansing, 48912.

June 16—MSMS Council, noon to 5 p.m., MSMS headquarters, East Lansing, contact: Warren F. Tryloff, MSMS director

June 20-24—Many Michigan physicians will attend the AMA Convention in Atlantic City

June 24-26—52nd annual meeting, Michigan Hospital Association, Grand Hotel, Mackinac Island, contact: H. Allan Barth, executive director, MHA, 2213 E. Grand River Ave., Lansing, 48912

July 30—Annual midsummer meeting of The MSMS Council, Boyne Highlands, contact: Warren F. Tryloff, MSMS director

Sept. 16-18—Michigan regional meeting of the American College of Physicians, in conjunction with the Michigan Society of Internal Medicine, Sheraton-Cadillac Hotel, Detroit

Oct. 1—Michigan Hospital Association House of Delegates meeting, Park Place Motor Inn, Traverse City, contact: H. Allan Barth, executive director, MHA, 2213 E. Grand River Ave., Lansing, 48912

Oct. 3 and 6—MSMS Council, Pantlind Hotel, Grand Rapids

Oct. 3-7—1971 MSMS Annual Session, Pantlind Hotel, Grand Rapids

Oct. 5-7—1971 Annual Convention of the Woman's Auxiliary to MSMS, Pantlind Hotel, Grand Rapids

Oct. 20-21—Michigan TB and Respiratory Disease Education Meeting, Kellogg Center, East Lansing, contact: Les Harcus, Public Relations, Michigan TB and Respiratory Disease Association, 403 Seymour, Lansing

Oct. 25-29—Michigan Nurses Association Convention, Pantlind Hotel, Grand Rapids, contact: William E. Ludwig, public relations director, MNA, 120 Spartan Ave., East Lansing, 48823

Nov. 10—MSMS Council, MSMS Headquarters, East Lansing, noon to 5 p.m., contact: Warren F. Tryloff, MSMS director

Nov. 28-Dec. 1—AMA Clinical Convention, New Orleans

Dec. 8—MSMS Council, MSMS Headquarters, East Lansing, 9:30 a.m., contact: Warren F. Tryloff, MSMS director

MICHIGAN
STATE
MEDICAL
SOCIETY

NEW MSMS MEMBERSHIP

MSMS now has available a gold-filled Official MSMS Membership Pin for use in the coat lapel, as a tie tack, etc. Send check made out to MSMS for $3.00 to Michigan State Medical Society, 120 West Saginaw, East Lansing, Michigan 48823.

CONSTIPATION
EVACUATE GENTLY

With EVAC-U-GEN — your patients with functional constipation can evacuate gently. Because EVAC-U-GEN has a mild laxative action and tends to cause the stool to be soft — it is highly desirable for those sensitive to harsh laxatives — particularly children, pregnant women, and geriatric patients. Recommend EVAC-U-GEN for the management of functional constipation. It is highly effective. Non-griping. Chewable. Very palatable. Economical.

EVAC-U-GEN®

A highly-flavored and palatable tablet of yellow phenolphthalein, bismuth subcarbonate, bismuth subgallate in special base. Chewable. Bottles of 35 and 100. Adult Dose: Chew 1 or 2 tablets night or morning. Children (up to age 10): ½ tablet. A citrus drink taken with tablet will stimulate action.
PRECAUTION: Do not use when symptoms of appendicitis are present and discontinue use if skin rash appears. Dependence on laxatives can result from continued use.

W-C
PRECISION PHARMACEUTICALS

SEND FOR SAMPLES.

WALKER, CORP & CO., INC.
Syracuse, New York 13201

Council minutes

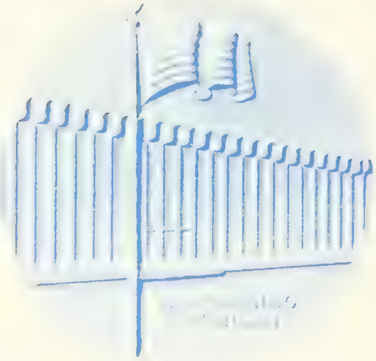
Extract of MSMS Council minutes; meeting of March 10, 1971

Medicaid surveillance project— The Council reaffirmed its cooperation in the State Department of Public Health Medicaid Surveillance Project. The project was reviewed for The Council by John L. Isbister, MD, head of the project team which set up the new system, and Thomas Lindsay, chief of the bureau to implement the project.

Blue Shield—The Council authorized its chairman to appoint an *ad hoc* committee to investigate the MSMS relationship with Blue Shield.

Peer Review — The Council adopted the following definition of peer review, to be included in the "Guidelines for MSMS Peer Review Program."—"Peer review is a review of physician's services by his colleagues, embracing evaluation of the quality of care provided, the frequency, volume and relationship of services offered to the pertinent diagnosis and the propriety of the charges submitted for the professional services rendered."

Economics Bureau—The Council approved two projects for the Bureau of Economic Information, one to collect information on the increased cost of prescribing two or more drugs in place of those combinations disapproved by HEW, and the second to investigate the validity of the rules of the fire marshall on hospitals, and the resultant increased cost of hospital care.



Medical Practice Act — The Council reaffirmed its support of concepts in the proposed Medical Practice Act as approved Feb. 3. The Council requested a copy of the finalized version of the proposed revision, directing MSMS to assume leadership in bringing together legislative leaders for exploration and study of the proposal, and directed that MSMS request the Board of Registration in Medicine to withhold introduction of such legislation pending the implementation of the foregoing.

Insurance — The Council requested that Ben Stratton negotiate with Mutual Benefit Life the highest age possible for evidence of insurability of MSMS members under the MSMS Group Life Master Policy, and approved the amendment to the master contract to permit assignment of benefits so that an insured member could collateralize indebtedness such as a personal loan.

PG Medical Education — The Council requested that the Committee on Postgraduate Medical Education submit a sample questionnaire for reference committee consideration on the topic of postgraduate requirements for continued medical licensure in Michigan.

Peer Review—The Council authorized the staff to advise the Health Insurance Association to list the MSMS Committee on Utilization Review and Health Insurance Problems as the receptacle for commercial insurance carriers to initiate requests for fee adjudication and other peer review matters. The committee was to immediately refer all requests to the appropriate county medical society committee.

MESH—The Council instructed the Committee on Highway Injury to investigate and report about the guidelines for a map of hospitals qualified to handle emergency patients being drawn up by the Medical Emergency Services Health Council. The MSMS Council wants to know what standards are being used, how they will be applied and what distribution will be made of the map.

Legislation—The Council approved MSMS support of the following bills: SB 39, to lower the blood level alcohol content for presumed intoxication from .15 percent to .10 percent; and HB 4085, to extend the "Good Samaritan" protection to time of transport of injured persons from site to hospital, and to physicians and nurses who give instructions "by any type of communications device."

Malpractice—The Council authorized appointment of an *ad hoc* committee, to consist of one member each from The Council, Legal Affairs Committee, Professional Insurance Plans Committee, the Liaison Committee with the State Bar. The committee is charged to maintain liaison with the special legislative study committee on malpractice actions and professional liability.

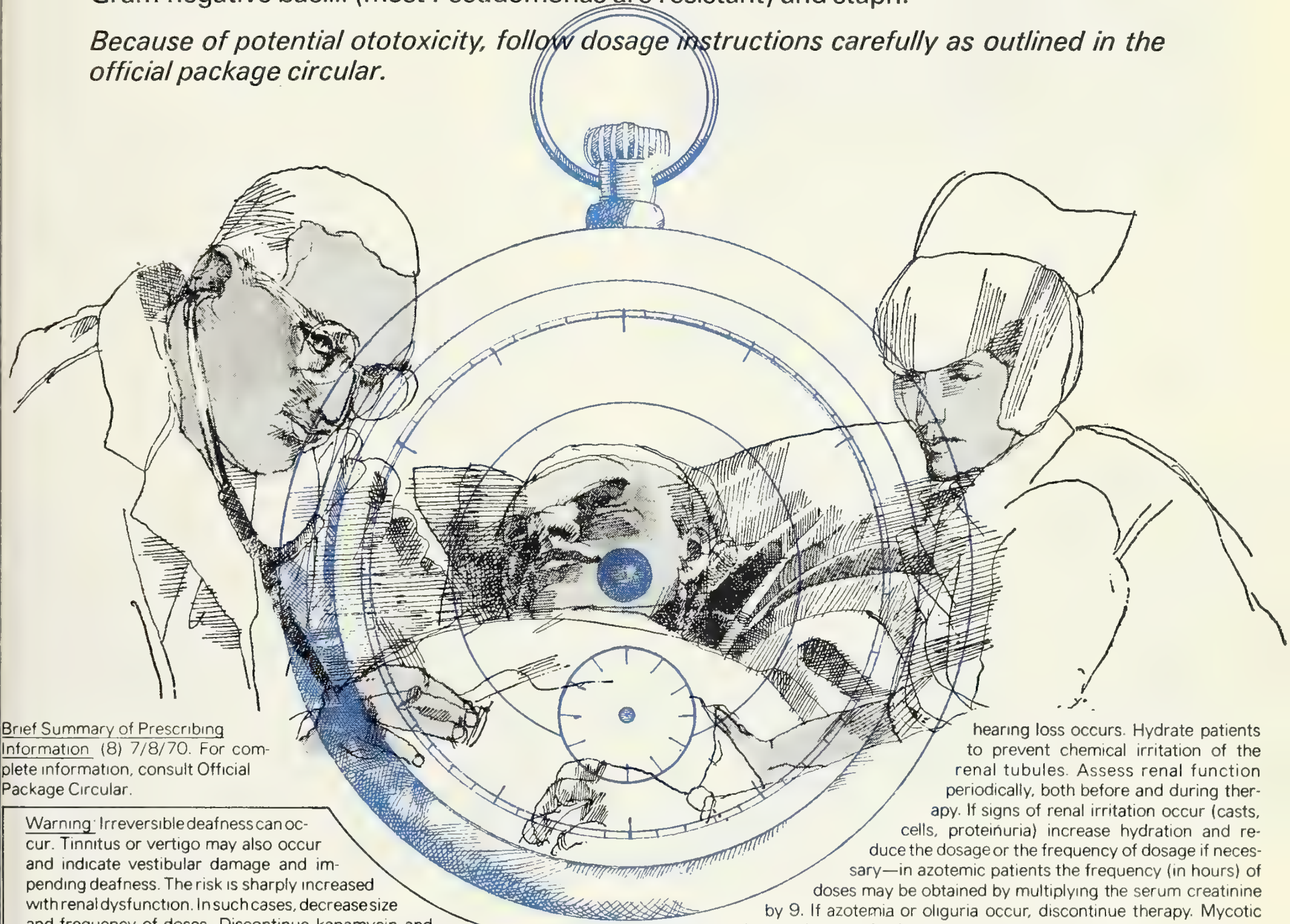
Council Elections—The Council elected John J. Coury, MD, MSMS assistant secretary; Robert K. Whiteley, MD, Detroit, for a one-year term on the Board of Managers; re-elected Ross V. Taylor, MD, Jackson, to a two-year term on the Board of Managers, and John W. Moses, MD, as scientific editor of *Michigan Medicine*.

A valuable hospital antibiotic —when there is no time

in severe systemic infections—postoperative bacteremia, Gram-negative/staph pneumonias or neonatal sepsis—Kantrex® (kanamycin sulfate) is often indicated before results of customary sensitivity tests can be reported. Clinical response is often seen within 24-48 hours in susceptible infections, with remission soon after.

10 years of experience confirm the continuing effectiveness of Kantrex® against many Gram-negative bacilli (most Pseudomonas are resistant) and staph.

Because of potential ototoxicity, follow dosage instructions carefully as outlined in the official package circular.



Brief Summary of Prescribing Information (8) 7/8/70. For complete information, consult Official Package Circular.

Warning: Irreversible deafness can occur. Tinnitus or vertigo may also occur and indicate vestibular damage and impending deafness. The risk is sharply increased with renal dysfunction. In such cases, decrease size and frequency of doses. Discontinue kanamycin and check hearing if azotemia increases. Watch carefully for ototoxicity in older patients and patients receiving more than 15 Gm. of kanamycin. To avoid neuromuscular paralysis with respiratory depression, postpone intraperitoneal instillation in post-operative patients until recovery from anesthesia and muscle relaxants is complete. Avoid concurrent use of other ototoxic drugs including ethacrynic acid. Safety in pregnancy is not established.

Indications: Serious infections due to susceptible strains of *E. coli*, Proteus sp., *Enterobacter aerogenes, K. pneumoniae, Serratia marcescens* and *Mima-Herellea*. Culture and sensitivity studies should be performed.

Contraindications: A history of hypersensitivity to the drug. Prior auditory damage by kanamycin or other agents may be a contraindication if effective alternative therapy is available.

Precautions: Obtain audiograms before and during therapy in patients with renal dysfunction when treatment lasts more than 5 days. Stop Kantrex if tinnitus or hearing loss occurs. Hydrate patients to prevent chemical irritation of the renal tubules. Assess renal function periodically, both before and during therapy. If signs of renal irritation occur (casts, cells, proteinuria) increase hydration and reduce the dosage or the frequency of dosage if necessary—in azotemic patients the frequency (in hours) of doses may be obtained by multiplying the serum creatinine by 9. If azotemia or oliguria occur, discontinue therapy. Mycotic or bacterial superinfection may occur.

Adverse Reactions: Irritation or pain at the injection site, skin rash, drug fever, headache and paresthesias.

Dosage and Administration: The maximum total daily dose should not exceed 1.5 Gm. by all routes of administration. The usual dose is 7.5 mg./Kg./12 hours I.M. The average adult dose is 1 Gm. daily. Uncomplicated infections due to sensitive organisms should respond in 24 to 48 hours. If no response occurs in 3 to 5 days, stop therapy and recheck the bacterial sensitivities. Hydrate patients well to minimize renal irritation. Inject deeply into the upper outer quadrant of the gluteal muscle. Discard partially used vials after 48 hours. The drug should not be physically mixed with other antimicrobials.

Supplied: Rubber capped vials as a ready-to-use sterile aqueous solution in two concentrations: 0.5 Gm. in 2 ml. and 1.0 Gm. in 3 ml. Also available—Pediatric Injection 75 mg. in 2 ml. A.H.F.S. Category 8:12.28

BRISTOL
BRISTOL LABORATORIES
Division of Bristol-Myers Company, Syracuse, New York 13201

KANTREX® INJECTION
(kanamycin sulfate)

Michigan communities needing physicians include Clio, according to retired resident Milo Geister, left. Allegan, represented at the MSMS workshop by Charles H. Yeates, right, administrator, Allegan Health Center, has had a net gain in recent years of six physicians. Mr. Geister and Mr. Yeates flank MSMS Rural Health Committee Chairman Donald R. McCorvie, MD, Williamston.

Douglas Jackson, far right, Wayne State University medical student, displays the table of communities needing physicians which was published in **Michigan Medicine.** He and fellow WSU student Sol Edelstein used the table to launch their campaign of individual contracts between medical students and Michigan communities.

Rural communities seeking physicians can follow these steps

A rural community can improve its chances of recruiting physicians by the following methods:

(1) commit itself to the campaign and provide sufficient funds;

(2) maintain a high standard of local hospital facilities;

(3) develop a brochure or promotional packet about the community;

(4) assess its opportunities for physicians to meet together and to obtain postgraduate medical education, and promote those opportunities, and

(5) consider and "woo" the physician's wife.

The suggestions above came out of a stimulating workshop called March 31 at MSMS Headquarters by the MSMS Committee on Rural Medical Service. Present were 11 members of the committee, chaired by Donald R. McCorvie, MD, Williamston; medical students; members of the press; and representatives of hospitals, Chambers of Commerce, and medical staffs of small Michigan communities.

Townspeople from Clio, Harbor Beach and Reading described their communities, all of which are in need of physicians, they said. They then listened as representatives from Allegan, Jackson, Mason, Hastings and Dowagiac described their various successes in attracting physicians to their communities.

Presentations were also made by several medical students and physicians involved in programs to place medical students in small Michigan communities.

A well-developed packet of promotional materials has helped attract 14 new physicians in recent years to Jackson, explains Nathan Munro, MD, standing, of that city. He was among those addressing the recent MSMS workshop to aid rural communities seeking doctors.

About doctors

N. C. and Rama Sekharan settled in Benton Harbor

Remember the Doctors Sekharan? N. C. and his wife, Rama, both specialists in obstetrics and gynecology, are the 999th and 1,000th physicians to be placed in Michigan practices by the Michigan Health Council. They were featured on the cover of the October *Michigan Medicine.*

The Sekharans completed their residencies in ob-gyn at Wayne State University, and after delays to obtain their licenses and insurance, began practice in Benton Harbor on Feb. 26.

The husband-and-wife physician team have bought a house in Benton Harbor and share an office near the downtown area of Benton Harbor across from Mercy Hospital. The Sekharans began practice part-time in the office of Clinton Wilson, MD, the Benton Harbor physician who was instrumental in getting the Sekharans placed in his community.

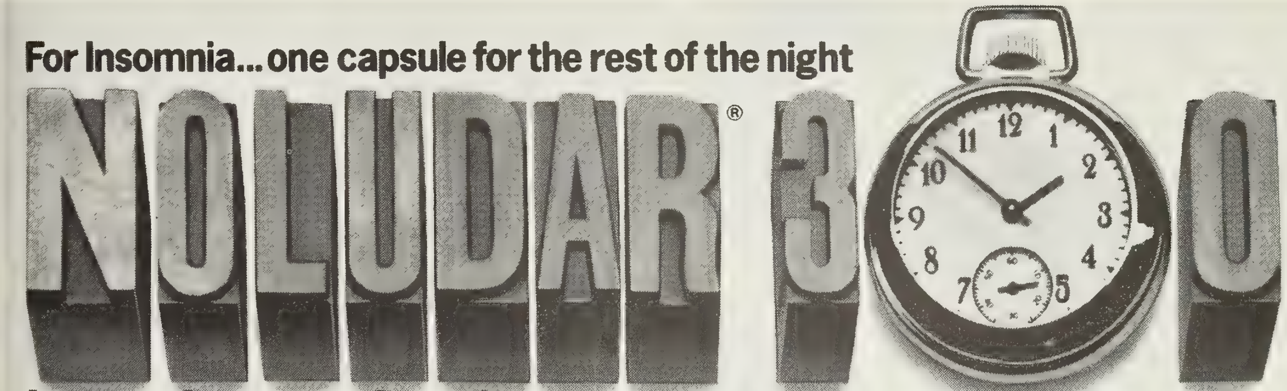
Doctor N. C. Sekharan has established an obstetrics clinic for indigent persons on Wednesday afternoons with space and personnel provided by the county public health commission. The clinic already has 60 patients and Doctor Sekharan is thinking of expanding it to another afternoon. In addition, he has plans for a gynecology clinic for indigents and his wife is planning to start an infertility clinic, with hopes of establishing a lab that can handle such work.

The Sekharans, the only obstetricians-gynecologists in the Benton Harbor-St. Joseph area, have set to work also to modernize the hospital obstetrics ward.

"We don't like the snow here," comments Doctor N. C. Sekharan. "But our practice is growing, the community has accepted us quite well and we are happy."

Harold E. Bowman, MD, Grand Rapids, is new president of the Kent Medical Foundation, which awards tuition grants to students in the allied health fields and medicine, and makes interest-free loans to medical students.

For Insomnia...one capsule for the rest of the night



(methyprylon)

Before prescribing, please consult complete product information, a summary of which follows:
INDICATION: Relief of insomnia of varied etiology.
CONTRAINDICATIONS: Patients with known hypersensitivity to the drug.
WARNINGS: Caution patients about combined effects with alcohol and other CNS depressants. Caution against hazardous occupations requiring complete mental alertness, such as operating machinery or driving a motor vehicle shortly after ingesting the drug.
Physical and Psychological Dependence: Physical and psychological dependence rarely reported. If withdrawal symptoms do occur they may resemble those associated with withdrawal of barbiturates and should be treated in the same fashion. Use caution in administering to individuals known to be addiction-prone or those whose history suggests they may increase the dosage on their own initiative. Repeat prescriptions should be under adequate medical supervision.
Usage in Pregnancy: Weigh potential benefits in pregnancy, during lactation, or in women of childbearing age against possible hazards to mother and child.
PRECAUTIONS: If sleeplessness is pain-related, an analgesic should also be prescribed. Perform periodic blood counts if used repeatedly or over prolonged periods. Total daily intake should not exceed 400 mg, as greater amounts do not significantly increase hypnotic benefits.
ADVERSE REACTIONS: At recommended dosages, there have been rare occurrences of morning drowsiness, dizziness, mild to moderate gastric upset (including diarrhea, esophagitis, nausea and vomiting), headache, paradoxical excitation and skin rash. There have been a very few isolated reports of neutropenia and thrombocytopenia; however, the evidence does not establish that these reactions are related to the drug.

Each capsule contains 300 mg of methyprylon.

ROCHE
ROCHE LABORATORIES
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

Darrell A. Campbell, MD, Ann Arbor,
head of the Department of Surgery at St. Joseph Mercy Hospital, is new chairman of the board of trustees of the Commission on Professional and Hospital Activities, an Ann Arbor medical research computer center. Representing the American College of Surgeons, a CPHA sponsor, he was elected to a one-year term.

Donald E. Economy, MD, Dearborn,
is new Dearborn Health Officer, appointed by the mayor, Orville L. Hubbard. Doctor Economy is also medical examiner for the Dearborn Draft Board and is on the staffs of Oakwood and Providence Hospitals. Doctor Economy succeeds Max Silverman, MD, who has served as acting health officer since the resignation in 1968 of the late Joseph G. Molner, MD.

Arthur L. Foley, MD, East Lansing,
is "Outstanding Faculty Member of the Year" at the Michigan State University College of Human Medicine, so named by Phi Delta Upsilon, professional medical fraternity. Doctor Foley is associate professor of anatomy at MSU.

C. Jackson France, MD, Grosse Pointe Park,
has been re-elected president of the Wayne State Fund board of directors to lead the fund's annual giving campaign during 1971. Doctor France is an adjunct associate professor of clinical surgery at the university.

Joseph A. Macksood, MD, Flint
is a new honorary life member of the Genesee County Medical Society, recognized for his service as a general practitioner in Flint since 1928. Doctor Macksood and his three sons, all physicians, practice in their own building.

Ivan J. Mader, MD, Pleasant Ridge,
becomes the first physician elected to the board of trustees of William Beaumont Hospital, Royal Oak. He has served as chief of staff for more than two years.

E. Newton Rottenberg, MD, Detroit,
is a new member of the executive committee of the Michigan Arthritis Foundation. He is also a member of the MAF's Bequest and Patient Services committees and serves on the MSMS Committee on Quackery.

Richard R. Royer, MD, Detroit,
has a good public relations idea, according to *Detroit News* columnist Charlie Manos. Doctor Royer stamps a note on the cover of his office magazines reading "We are finished with this particular magazine. You may clip, cut or rip it or take it home." Good way to get rid of the old ones, Manos notes.

William Skellenger, MD, Kalamazoo,
recently spent a month-long mission as a rotating physician at Albert Schweitzer Hospital, Des Chapelle, Haiti.

Manuel Sklar, MD, Detroit,
has been re-elected to a three-year term on the board of trustees of the American College of Gastroenterology.

Frederick C. Swartz, MD, East Lansing,
chairman of the AMA Committee on Aging, has been appointed to the new Accreditation Council for Long-Term Care Facilities under the Joint Commission on Accreditation of Hospitals.

Emanuel Tanay, MD, Grosse Pointe Parke,
adjunct professor of psychiatry and law at Wayne State University, is new chairman of the council of the American Academy of Forensic Sciences. Doctor Tanay also heads the academy's psychiatry section.

John Tanton, MD, Petoskey,
told 300 Michigan Audubon Society members at a recent meeting in Traverse City that continuing economic growth will be as harmful to natural resources in the long run as unlimited population control. Doctor Tanton said many land developers and a proposed $650 million highway and economic development program will leave many "local communities actually worse off than they were before" due to added economic and social pressures and destruction of natural resources.

Wallace W. Tourtellotte, MD,
is new vice chairman of the neurology department of the University of California at Los Angeles, effective April 1. Doctor Tourtellotte has been a professor in the University of Michigan neurology department since 1954. Doctor Tourtellotte has worked chiefly in the neurochemistry of multiple sclerosis and has received a total of $352,867 from the National Multiple Sclerosis Society for his research over a period of 15 years.

Arthur W. Weaver, MD, Allen Park,
chief surgeon at the Allen Park VA Hospital, is "Man of the Year," named by the Michigan Cancer Foundation for his contributions to public health in conducting Stop Smoking clinics in 1970. On his own time, Doctor Weaver has conducted more than 30 smoking clinics in the past five years, and appeared on television about 100 times.

Your opinion please

How can physicians—especially young physicians —be encouraged to practice in the inner city and rural areas?

Here Doctor Chapin, who speaks of the inner city, and Doctor Comstock, who describes his project to attract medical students to rural family practices, continue the discussion begun on these pages in February.

Sidney E. Chapin, MD
Dearborn

It is a difficult task to attract anyone into an unattractive area.

Fear is a major deterrent to attracting physicians into the Inner City Area. A lack of quality educational, cultural and social facilities commensurate with what a young physician desires for his family, is an additional drawback. In addition, the physician who cannot live in the community in which he practices loses an important facet of quality care, that is, availability.

Even a more-than-average salary with fringe benefits, liberal time off, etc. cannot overcome the deterrents, and it is quite possible that the available economic resources could not meet these requirements.

Also, attracting the young physician, as dedicated as he might be, is not the entire answer. The door-to-door health care that the Inner City requires is not feasible or efficient.

To attract a physician, young or old, to practice in the Inner City will require a rehabilitation program of the area, a crime-control program of great magnitude, and this cannot be done without an intensive educational program for those who live in the Inner City Area. When this is accomplished, attracting the physician may not be necessary—the community would seek him out, or he would seek the community.

No better laboratory to train family MDs than the community

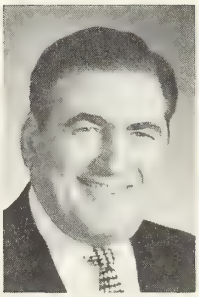
By L. David Comstock, Jr., MD
Dowagiac

The concept that meaningful medical education can only take place within the confines of the large medical school-metropolitan hospital complex deserves to be challenged.

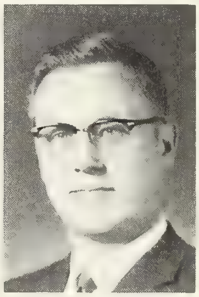
Despite the many successes of the system, it cannot shrug off its failures. The most obvious of these is a medical delivery system that is top heavy with specialists and sub-specialists that is unable to meet the primary health needs of the medical consumer.

An equally serious failure in the contemporary system of medical education is reflected in the maldistribution of physicians. The desperate struggle of small communities all over the United States to attract physicians as well as the poor medical care delivery to the economically impoverished, whether they reside in rural or urban areas, is too well known to need documentation and is ample testimony that the medical education system in the United States is in urgent need of redirection.

It is not likely that relevant policy changes will be effected until the neglected consumer, through his logical spokesman, (the rural physician or the



Doctor Chapin



Doctor Comstock

ghetto physician) is allowed some significant input into the educational scene.

A successful liaison between this writer and the Department of Medicine of the University of Chicago Pritzker School of Medicine, which began during the summer of 1969, is illustrative of the fact that programs of medical education can be carried on in the rural community without significant cost or administrative red tape and which better enable the student participants to establish relevant career goals.

To date, 10 senior medical students have availed themselves of the elective entitled "Senior Clinical Clerkship," and described as follows in the curriculum catalogue of The University of Chicago School of Medicine:

> "An opportunity is available for one or two senior students per month to work with David Comstock, MD, in Dowagiac, Michigan, at Lee Memorial Hospital in that city. This course is designed to familiarize students with the nature of general practice. The students will participate in the office, but particularly in the hospital care of Dr. Comstock's patients and others, in a manner similar to the senior students' responsibilities on the General Medicine Service. The students will be the only house staff members in this 60-bed hospital. They will function essentially as interns. The bedside responsibilities are substantial, and provide opportunity for improving diagnostic and therapeutic skills under the guidance of physicians with extensive clinical experience. Orientation will be provided by Dr. Comstock, and experiencing the social side of the life of a general practitioner will not be neglected. This course may be looked upon as a substitute for the General Medicine Course 323. Room, board and laundry will be provided by the Lee Memorial Hospital.
>
> Prereq.: completion of the junior year. Number of students: max.=2, min.=1. Subscription time = 4 wks. Location = Lee Memorial Hospital, Dowagiac, Michigan."

Dowagiac (population 7,500) is the largest city in rural Cass County (population 40,000) and contains the only acute care general hospital (Lee Memorial Hospital) in the county. Cass County experiences a heavy influx of resorters and Spanish-American migrants during the summer months, giving it unique medical and social problems that contrast sharply with those apt to be experienced in the large metropolitan areas.

This uniqueness was capitalized upon through the assignment of students to the medically undermanned migrant health clinic. The student reaction to this experience was uniformly enthusiastic and favorable, as was their reaction to emergency room problems, which in a rural setting, have their own flavor (fishhooks, poison ivy, drownings, poisoning from Pokeberries, snake bite, etc.) and are not necessarily a reduplication of metropolitan hospital emergency room problems.

One of the most beneficial aspects of the program was the student participation in day-to-day care of hospitalized patients. In many instances, their medical erudition and sophistication was awesome and their penetrating inquiries and observations effected an interchange of ideas that stimulated student and physicians alike.

The program is totally flexible and at all times, within reason, adapted to the students' needs and interest. Every attempt is made to quickly involve the student in community activities, such as School Board meetings, Rotary Club meetings, High School Athletic functions. Social and recreational functions such as brief hunting, fishing, hiking and sailing experiences are not neglected. By virtue of this total community participation, the student often is afforded the opportunity of seeing a patient in a social or business or recreational setting.

The student reaction to this program has been reward enough for the minimal efforts expended in its development. All have declared that it showed them a humanistic experience in medicine that they had not heretofore witnessed and they felt that their previous experiences in the large institutional setting were detrimentally impersonal. They were all pleasantly surprised by the quality of small town life in contrast to the tension and insecurity in urban living. It seems very likely that their brief small town experience has affected the career goals of some of these students. (It is noteworthy that *all* students have specifically requested house call experience.)

Several students have revisited our community since their return to the University of Chicago. All have corresponded with this writer following their clerkship and expressed a favorable reaction to this educational experience as well as a continuing interest in our community. The following letter received from one student is a typical response:

> "Dear Dr. Comstock:
>
> I would like to take this opportunity to formally thank you for making my all too short one month in your town so intellectually and clinically rewarding.
>
> This past month has already changed some of my preconceived biases concerning 'LMD's' and the pressing problems of the delivery of health care. I can only wish that all of my classmates would be inclined to take advantage of such a program so that they could be aware of the excellency of medicine and surgery outside of the

(Continued on Page 458)

POST GRADUATE COURSE
on
INTESTINAL OBSTRUCTION
and
THE USE OF INTESTINAL DECOMPRESSION TUBES

Directed by

Meyer O. Cantor, M.D., M.S., F.A.C.S., F.A.C.G.
and associates at North Detroit General Hospital
Detroit, Michigan

July 22, 23, 24, 1971

This course is designed to present in depth a complete presentation of all phases of intestinal obstruction as practiced in 1971. Fluid and electrolyte requirements, pulmonary physiology, cardiac complications, and the recent use of neurolept anesthesia in the treatment of the poor risk obstructed patient will all be presented in detail.

The diagnosis of intestinal obstruction, clinical as well as radiological, and its treatment will be detailed. Ileus will be comprehensively studied.

The use of all types of intestinal decompression tubes will be discussed in detail with special attention being given to the use of the CANTOR TUBE. Indications, contra-indications and the complications will be presented.

For further information and registration write to: Mr. Monroe M. Title, Administrator, North Detroit General Hospital, 3105 Carpenter, Detroit, Mich. 48212. Fee: $100 made payable to "North Detroit General Hospital."

Gone with the wind

The gas/acid group of disorders

"The two most common complaints referable to the upper gastrointestinal tract for which patients seek medical relief are hyperacidity and 'gas.' The two often occur together."*

Frees captured gas...neutralizes free acid

SILAIN-GEL Tablets and Liquid are separate formulas designed to provide equivalent dual-action symptomatic relief. Both dosage forms contain simethicone which effectively frees trapped gas, enabling the patient to eliminate it. Magnesium hydroxide in both assures a rapid rise in pH for prompt relief of hyperacidity. The special co-dried aluminum hydroxide/magnesium carbonate gel in the tablets assures the same rapid and uniform reaction rate as the liquid. Thus, both medications achieve prompt and prolonged neutralization of free acid *plus* prompt relief from the pain and pressure of trapped gas.

Always in good taste

The pleasant, distinctive flavor of SILAIN-GEL, as well as its non-constipating feature, make it a therapy your patients can live with—in comfort and without complaint.

Select the form of SILAIN-GEL you want to provide symptomatic relief in: gastric ulcer • duodenal ulcer • heartburn • gastric hyperacidity • gastritis • dyspepsia

when the patient prefers the convenience of a tablet, select

Silain-Gel® Tablets:

when the patient prefers a liquid, select

Silain-Gel® Liquid

Also available for the patient who needs an antifrothicant/antiflatulent agent only: **Silain®** (simethicone) Tablets

*Slanger, A.: Med. Times *94*:150 (Feb.) 1966.

Announcing the "Antgasid"

Silain-Gel®

Tablets: simethicone plus aluminum hydroxide/magnesium carbonate co-dried gel and magnesium hydroxide
Liquid: simethicone plus aluminum hydroxide and magnesium hydroxide

one dose does both: frees captured gas...neutralizes free acid

A·H·ROBINS A.H. Robins Company, Richmond, Virginia 23220

sterile solution (300 mg per ml.)

Consider Lincocin®

(lincomycin hydrochloride, Upjohn)

Vial Sterile Solution
Lincocin®
(lincomycin hydrochloride injection)
to 300 mg. per cc.
lincomycin
Upjohn
3 Gm. per 10 cc.
Federal law prohibits
without prescription
EXPIRES →
2cc. Sterile Solution No. 8055
Lincocin®
(lincomycin hydrochloride
injection)

For your convenience
in 2 ml. and 10 ml. vials…

and single-dose 2
disposable syringe

©1970 by The Upjohn Company JA70-9835 MED B-4-S (KZL-5)

Upjohn THE UPJOHN COMPANY
KALAMAZOO, MICHIGAN

once-popular treatment for back pains
as to have the seventh son of a seventh son
tand or walk on the patient's back.

The pain of earache was allegedly relieved by holding a hot roasted onion to the ear.

r headache, a sovereign remedy was
wear a snakeskin round one's head.

A realistic approach to pain relief

Empirin'®

**ompound with Codeine
hosphate gr. 1/2 No. 3**

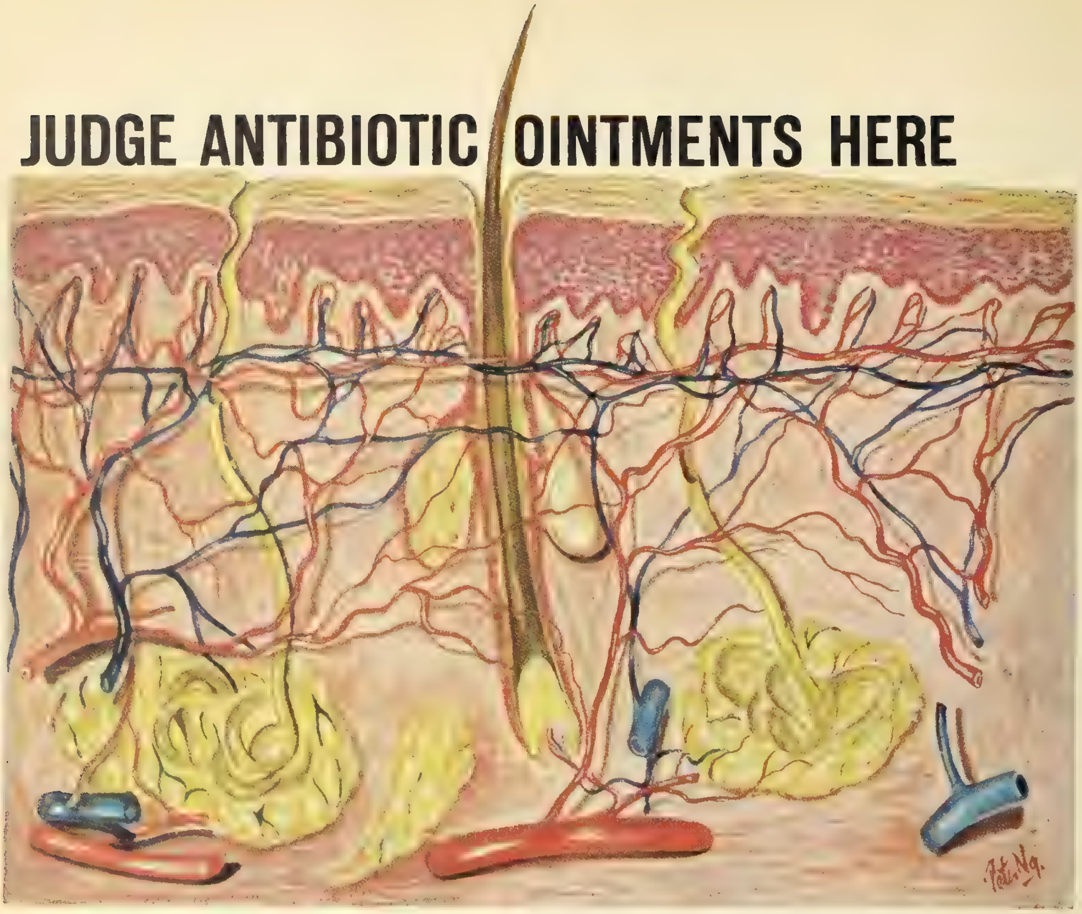
ach tablet contains:
odeine Phosphate gr. 1/2 (Warning—
ay be habit forming), Phenacetin gr. 2 1/2,
spirin gr. 3 1/2, Caffeine gr. 1/2.

**eeps the promise
f pain relief**

W. & Co.' narcotic products are
ass "B", and as such are available on oral
escription, where State law permits.

**BURROUGHS WELLCOME & CO. (U.S.A.) INC.
Tuckahoe, N.Y.**

JUDGE ANTIBIOTIC OINTMENTS HERE



Results on skin are final proof of any topical antibiotic's effectiveness

No in vitro test can duplicate a clinical situation on living skin. 'Neosporin' (polymyxin B —bacitracin—neomycin) Ointment has consistently proven its effectiveness in thousands of cases of bacterial skin infection. The spectra of the three antibiotics overlap in such a way as to provide bactericidal action against most pathogenic bacteria likely to be found topically. Diffusion of the antibiotics from the special petrolatum base is rapid since they are insoluble in the petrolatum, but readily soluble in tissue fluids. The Ointment is bland and nonirritating.

Caution: As with other antibiotic preparations, prolonged use may result in overgrowth of nonsusceptible organisms and/or fungi. Appropriate measures should be taken if this occurs. Articles in the current medical literature indicate an increase in the prevalence of persons allergic to neomycin. The possibility of such a reaction should be borne in mind.

Contraindications: This product is contraindicated in those individuals who have shown hypersensitivity to any of its components.

Supplied: Tubes of 1 oz., ½ oz. with applicator tip, and ⅛ oz. with ophthalmic tip.

Complete literature available on request from Professional Services Dept. PML.

'NEOSPORIN'®
brand

POLYMYXIN B-BACITRACIN-NEOMYCIN
OINTMENT

BURROUGHS WELLCOME & CO. (U.S.A.) INC., Tuckahoe, N.Y.

This "case history" runs to some 10,000 pages

This is a typical "case history" of one new drug—or, rather, a proposed new drug—assembled for submission to the U.S. Federal Food and Drug Administration. These volumes are the result of several years' work by thousands of professional and skilled personnel in just one pharmaceutical company's research laboratories, and by hundreds of physicians in medical schools, hospitals, and private practice. They cover every aspect of experience with this proposed new agent from chemical laboratory to clinic, from mouse to man. Each volume could conceivably represent hundreds of thousands of dollars of financial investment, countless hours of human effort. This veritable mountain of data stands behind every new agent offered to you by pharmaceutical manufacturers—a reassuring testimonial to the efficacy, safety and purity of the drugs you will prescribe today to lower the cost of disease to your patients.

Pharmaceutical Manufacturers Association
Pharmaceutical Advertising Council
1155 Fifteenth St., N. W., Washington, D.C. 20005

This message is brought to you as a courtesy of this publication on behalf of the producers of prescription drugs

When irritable colon feels like this

...in the presence of spasm or hypermotility, gas distension and discomfort, **KINESED®** provides more complete relief:

- ☐ **belladonna alkaloids—for the hyperactive bowel**
- ☐ **simethicone—for accompanying distension and pain due to gas**
- ☐ **phenobarbital—for associated anxiety and tension**

Composition: Each chewable, fruit-flavored, scored tablet contains: 16 mg. phenobarbital (warning: may be habit-forming); 0.1 mg. hyoscyamine sulfate; 0.02 mg. atropine sulfate; 0.007 mg. scopolamine hydrobromide; 40 mg. simethicone.
Contraindications: Hypersensitivity to barbiturates or belladonna alkaloids, glaucoma, advanced renal or hepatic disease.
Precautions: Administer with caution to patients with incipient glaucoma, bladder neck obstruction or urinary bladder atony. Prolonged use of barbiturates may be habit-forming.
Side effects: Blurred vision, dry mouth, dysuria, and other atropine-like side effects may occur at high doses, but are only rarely noted at recommended dosages.
Dosage: Adults: One or two tablets three or four times daily. Dosage can be adjusted depending on diagnosis and severity of symptoms. Children 2 to 12 years: One half or one tablet three or four times daily. Tablets may be chewed or swallowed with liquids.

STUART PHARMACEUTICALS | Pasadena, California 91109 | Division of ATLAS CHEMICAL INDUSTRIES, INC.

(from the Greek **kinetikos**,
to move,
and the Latin **sedatus**,
to calm)

KINESED®

antispasmodic/sedative/antiflatulent

Spring peeper (tree frog, *Hyla crucifer*): this small amphibian can expand its throat membrane with air until it is twice the size of its head.

urban medical center. Perhaps this would broaden many all too narrow career plans.

I do not believe that I can recount all the new clinical experiences, or for that matter, all the old ones reinforced that I encountered in your city. I only know that I can only be a better physician after spending time with you."

It does not seem unreasonable to suggest that other medical schools re-evaluate their responsibilities to the communities in their service areas and their responsibilities to their students in terms of a more comprehensive medical education. Financial consideration can be quickly set aside as students out of residence are a financial asset rather than a liability to the institution involved. In a time when there is enormous interest in physician assistants, what better source is there than the well trained senior medical student?

Because of the initial success of this program and the continuing interest of students in this type of educational experience and because of recent renewed interest in establishing family practice departments in medical schools, a final point should be made. No better clinical laboratory for the training and development of family practioners exists than the rural community. It is not likely that this milieu can be successfully reduplicated in the medical school-metropolitan hospital complex. The economic as well as the academic advantages of utilizing the medical-educational resources of the small communities throughout the United States are too obvious to mention.

Concentration of the training of students or residents interested in Family Practice in the traditional medical school environment will be not only costly but self defeating, for it will tend to perpetuate maldistribution of physicians as well as further diminish the lines of communication between the small communities (wherein 50,000,000 persons annually get their medical care) and the medical education hierarchy.

MD Placement Notice

- —Looking for a smaller town that needs and wants a physician?
- —Do you need an associate or assistant in your practice?
- —Are there towns in your area in need of additional physicians?
- —If your answer is YES to any of the above questions, contact

Michigan Health Council
John A. Doherty, Executive Secretary
712 Abbott Rd., P.O. Box 431
East Lansing (Phone: 337-1615)
(No charge for this service)

Brief Summary of Prescribing Information— 9-9/22/69. For complete information consult Official Package Circular.
Indications: Essential hypertension. Use cautiously in patients with renal insufficiency, particularly if they are digitalized.
Contraindications: Anuria, oliguria, active peptic ulceration, ulcerative colitis, severe depression or hypersensitivity to its components contraindicates the use of Salutensin.
Warnings: Small-bowel lesions (obstruction, hemorrhage, perforation and death) have occurred during therapy with enteric-coated formulations containing potassium, with or without thiazides. Such potassium formulations should be used with Salutensin only when indicated and should be discontinued immediately if abdominal pain, distension, nausea, vomiting or gastrointestinal bleeding occurs. Use cautiously, and only when deemed essential, in fertile, pregnant or lactating patients. *Use in Pregnancy:* Thiazides cross the placenta and can cause fetal or neonatal hyperbilirubinemia, thrombocytopenia, altered carbohydrate metabolism and possibly electrolyte disturbances. Fatal reactions may occur with reserpine during electroshock therapy; discontinue Salutensin 2 weeks before such therapy. Increased respiratory secretions, nasal congestion, cyanosis and anorexia may occur in infants born to reserpine-treated mothers.
Precautions: Azotemia, hypochloremia, hyponatremia, hypochloremic alkalosis and hypokaliemia (especially with hepatic cirrhosis and corticosteroid therapy) may occur, particularly with pre-existing vomiting and diarrhea. Potassium loss or protoveratrine A may cause digitalis intoxication. *Potassium loss responds to potassium-rich foods, potassium chloride or, if necessary, discontinuation of therapy. Stop therapy if protoveratrine A induces digitalis intoxication.* Serum ammonia elevation may precipitate coma in precomatose hepatic cirrhotics. Discontinue therapy 2 weeks before surgery or if myocardial irritability, progressive azotemia or severe depression occur. Exercise caution in patients with chronic uremia, angina pectoris, coronary thrombosis or extensive cerebral vascular disease *or bronchial asthma* and in those with a history of peptic ulceration or bronchial asthma; in post-sympathectomy patients; in patients on quinidine; and in patients with gallstones, in whom biliary colic may occur. Patients who have diabetes mellitus or who are suspected of being prediabetic should be kept under close observation if treated with this agent.
Adverse Reactions: Hydroflumethiazide: Skin rashes (including exfoliative dermatitis), skin photosensitivity, urticaria, necrotizing angiitis, xanthopsia, granulocytopenia, aplastic anemia, orthostatic hypotension (potentiated with alcohol, barbiturates or narcotics), allergic glomerulonephritis, acute pancreatitis, liver involvement (intrahepatic cholestatic jaundice), purpura plus or minus thrombocytopenia, hyperuricemia, hyperglycemia, glycosuria, malaise, weakness, dizziness, fatigue, paresthesias, muscle cramps, skin rash, epigastric distress, vomiting, diarrhea and constipation. *Reserpine:* Depression, peptic ulceration, diarrhea, Parkinsonism, nasal stuffiness, dryness of the mouth, weight gain, impotence or decreased libido, conjunctival injection, dull sensorium, deafness, glaucoma, uveitis, optic atrophy, and, with overdosage, agitation, insomnia and nightmares. *Protoveratrine A:* Nausea, vomiting, cardiac arrhythmia, prostration, blurring vision, mental confusion, excessive hypotension and bradycardia. (Treat bradycardia with atropine and hypotension with vasopressors.)
Usual Dose: 1 tablet b.i.d.
Supplied: Bottles of 60, 600, and 1000 scored 50 mg. tablets.

Salutensin®
hydroflumethiazide, 50 mg./reserpine, 0.125 mg. protoveratrine A, 0.2 mg.

BRISTOL
BRISTOL LABORATORIES
Division of Bristol-Myers Company
Syracuse, New York 13201

The antihypertensive therapy that is easy to live with.*

When successive blood pressure readings confirm essential hypertension, consider Salutensin for:

Easy-to-live-with control. Gradual reduction of blood pressure leading to decisive, comfortable control is the common clinical response.

*Salutensin is usually well-tolerated (however, serious side effects can occur; see adjacent column for brief summary of prescribing information).

Easy-to-live with dosage. Two tablets a day usually achieves control. One to two tablets a day often maintains control without need for additional antihypertensive agents.

Easy-to-live with cost of therapy. The one to two tablets a day maintenance dose makes Salutensin economical to stay with. Important, because long-term control calls for long-term therapy.

Salutensin®

hydroflumethiazide, 50 mg./reserpine, 0.125 mg. protoveratrine A, 0.2 mg.

13 steps to avoid a malpractice suit

The following article is reprinted with permission, from the October, 1970, issue of *Medical Staff-in-Action.*

In a recent article in Resident and Staff Physician, (June, 1970), Gene Balliett, president of a management consultant firm, presented thirteen points to aid in avoiding a malpractice suit. Once professional liability insurance has been bought and the policy carefully read, the following steps are recommended when problems arise with a case:

1. ALERT YOUR INSURER. Notify him as soon as an accident occurs, instead of waiting until you receive notice of an impending lawsuit.

2. KEEP YOUR INSURANCE COVERAGE TO YOURSELF. Do not invite a malpractice suit by announcing to others the extent of your insurance coverage.

3. ADMIT AN HONEST MISTAKE – BUT NOT LEGAL LIABILITY. Admitting an honest mistake is not the same as assuming liability. A court of law is responsible for determining liability.

4. WHEN YOU DO ERR, AVOID THE RISK OF MAKING AN EVEN BIGGER ERROR – THAT OF TRYING TO COVER UP. Even after making an error, continue to practice good medicine. A court may forgive an honest mistake, but usually will not rule favorably if a mistake is compounded by an effort to cover it up.

For guidance with a specific case, the best initial source of advice is your professional liability insurer.

5. REFER THE PLAINTIFF'S ATTORNEY TO YOUR OWN. Allow the lawyers to talk together, with the physician staying out of the conversation as much as possible.

6. IF A CASE DOESN'T GO QUITE RIGHT, THINK TWICE ABOUT TURNING THE PATIENT'S ACCOUNT OVER FOR COLLECTION. Employing a collection agency often is the action which finally pushes a patient into bringing charges against a physician.

Additional suggestions in avoiding a law suit include:

7. LEARN TO RECOGNIZE A SUIT-PRONE PATIENT. Special care should be taken with patients who show an over-concern with money, unusually pointed criticism of one or more previous doctors, suspicion, and an unrealistic expectation of good results.

8. PROCEED ONLY WITH A PATIENT'S INFORMED CONSENT. A physician cannot legally proceed unless informed consent is obtained from the patient.

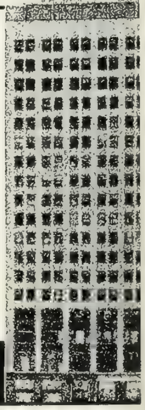
9. PRACTICE WITHIN THE LIMITS OF YOUR COMPETENCE. If a physician presents himself as a specialist, he must practice as a competent specialist.

10. BE SLOW TO GUARANTEE A GOOD RESULT. If care is taken while discussing a case or procedure with a patient, there is less chance of being held for breach of oral contract.

11. KEEP GOOD RECORDS. Extensive, accurate records are a necessity if a case is brought to court.

12. SEE A CASE THROUGH ONCE YOU START. Once a physician begins to see a patient, he cannot abandon him without being held responsible for him.

13. HEAD OFF ASSISTANT'S ERRORS. The physician is responsible for anything done by anyone who works for him.



THE FINEST NAME IN MEDICAL - DENTAL ARTS

THE DAVID WHITNEY BUILDING

WOODWARD AT GRAND CIRCUS PARK AND WASHINGTON BOULEVARD

IMMEDIATE OCCUPANCY • VARIOUS SIZE SUITES AVAILABLE

THE DAVID WHITNEY BUILDING CONTAINS DETROIT'S FINEST MEDICAL, DENTAL AND X-RAY LABORATORIES PLUS A PHARMACY FOR YOUR CONVENIENCE, LOCATED MINUTES FROM THE NEW DETROIT MEDICAL CENTER. • AUTOMATIC ELEVATORS • BARBER SHOP • SNACK SHOP • BANK • COMPLETE BUILDING SECURITY • FINEST PERSONALIZED JANITORIAL AND MAINTENANCE INCLUDED • ADJACENT TO LARGE PARKING GARAGE • SPECIAL RATES TO NEW DOCTORS

hayman management company 962-3058

BRIGHTON HOSPITAL

A non-profit foundation

FOR ALCOHOLISM

Member, Michigan Hospital Association, American Hospital Association

A facility designed to rehabilitate and aid the compulsive drinker in arresting his addiction.

Brighton Hospital meets the standards established by the Michigan State Board of Alcoholism and is recommended by that Board.

12851 East Grand River
One block south of I-96 at Kensington Rd. Exit
four miles east of U.S. 23
Brighton, Michigan
ACademy 7-1211

(A 16-m.m. sound color film on Brighton Hospital is available for free loan to qualified groups.)

Specialized Service

IN

PROFESSIONAL LIABILITY INSURANCE

is a high mark of distinction

THE
MEDICAL PROTECTIVE COMPANY
FORT WAYNE, INDIANA

Professional Protection Exclusively since 1899

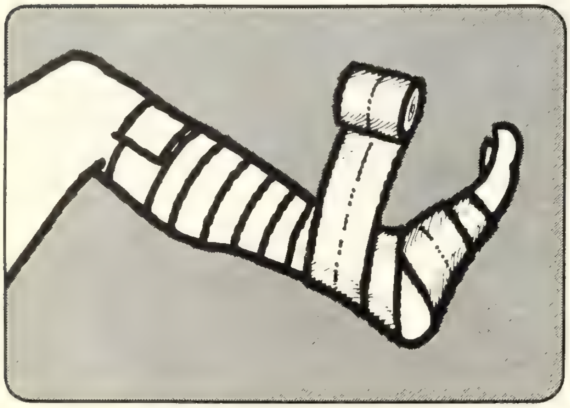
DETROIT OFFICE: R. K. Wind and J. K. Galloway, Representatives
27200 Lahser Road, Southfield 48075, Telephone: (Area Code 313) ELgin 3-4848 or 444-1439

GRAND RAPIDS OFFICE: G. J. Haworth, Representative
422 Federal Square Building, Grand Rapids 49502 Telephone: 616-454-4477

PRIMER®

PLUS

Flexoplast®



A practical, ambulatory treatment for leg ulceration

The Flexible Cast: The PRIMER medicated bandage, in conjunction with the FLEXOPLAST elastic adhesive bandage, comprise the cast.

This is a more comfortable and faster method of healing than Unna's Boot. Frequent changing of the dressing is eliminated. The newly forming granulation and epithelium are left undisturbed. It is the modern form of treatment.

EDWARD TAYLOR Ltd.
A Division of Glenwood Laboratories Inc.
Tenafly, New Jersey 07670

Gentlemen:

Please send me

☐ literature

☐ samples of PRIMER medicated bandage and FLEXOPLAST elastic adhesive bandage.

Name .... M.D.

Address ....

City ....

State .... Zip ....

New Members

Members of the Michigan State Medical Society join in welcoming the following new members into a progressive state medical organization. MSMS is dedicated to promoting the science and art of medicine, the protection of the public health, and the betterment of the medical profession. Each new member is encouraged to join with other MSMS members at both the local and the state levels in achieving these goals.

Lourdes V. Andaya, MD, Harper Hospital, Detroit 48201

Faris J. Azoury, MD, Detroit General Hosp., Detroit 48226

Michael D. Bailie, MD, Dept. of Medicine—MSU, East Lansing 48823

Joseph A. Bernier, MD, 218 E. Railway, Sanford 48657

Charles E. Boonstra, MD, Mercy Hospital Lab., Benton Harbor 49022

Wm. G. Bouman, MD, 201 Lafayette Ave., S.E., Grand Rapids 49503

Edgar A. Calvelo, MD, Detroit General Hosp., Detroit 48226

Carlos Carrasquilla, MD, Veteran's Hospital, Allen Park 48101

Thomas W. Chaffee, MD, 209 Abbott Rd. #204, East Lansing 48823

Jose Leon Chalela, MD, 122 W. Washington Ave., Romeo 48065

Tullio L. Coccia, MD, 20211 Greenfield, Detroit 48235

J. Richard Crout, MD, Dept. of Pharmacology—MSU, East Lansing 48823

Stephen F. Crowley, MD, W. A. Foote Mem. Hosp., Jackson 48202

Frederick R. Cushing, MD, 22101 Moross Rd., Detroit 48236

Norbert P. Czajkowski, MD, 189 Townsend, Birmingham 48009

Frank J. Detterbeck, MD, Howell State Hospital, Howell 48843

Juan C. DiMusto, MD, 1554 Tuxedo, Detroit 48206

David G. Dvorak, MD, 212 Bronson Medical Ctr., Kalamazoo 49006

Thomas A. Eggleston, MD, 2867 Germain Dr., Saginaw 48601

Roger K. Ferguson, MD, Dept. of Medicine, Michigan State Univ., East Lansing 48823

Shiro Fujita, MD, Henry Ford Hospital, Detroit 48202

Norman J. Gersabeck, MD, 29226 Orchard Lake Rd., Farmington 48024

Carlos Grodsinsky, MD, Henry Ford Hospital, Detroit 48202

Lovell I. Guanco, MD, 140 Elizabeth Lake Rd., Pontiac 48053

Thomas A. Helmrath, MD, 227 Kenberry Dr., East Lansing 48823
Orest E. Horodysky, MD, 18055 Greenfield, Detroit 48235
Glen A. Johnston, MD, 369 Glendale, Detroit 48203
John W. Jones, MD, Dept. of Medicine—MSU, East Lansing 48823
Ahmad Kafi, MD, 20101 James Couzens Hwy., Detroit 48235
Peter J. Kalabat, MD, St. Joseph Mercy Hosp., Detroit 48211
John W. Kaminski, MD, 3001 Miller Rd., Dearborn 48120
Tai K. Kang, MD, 432 N. Saginaw St. #707, Flint 48502
Shahin B. Koegler, MD, Detroit General Hosp., Detroit 48226
Peter A. Lange, MD, Howell State Hospital, Howell 48843
Young Mo Lee, MD, 25210 Grand River Ave., Detroit 48240
Daniel K. Li, MD, 13118 Fort St., Southgate 48192
Arnold E. Lightbourn, MD, 3800 Woodward Ave., Detroit 48201
Jess Lim, MD, 15101 Southfield, Allen Park 48101
William Lim, MD, Northville State Hosp., Northville 48167
Modesto Lorenzo, MD, 108 W. Seventh St., Gaylord 49735
A. Q. Luz-Pineda, MD, Mill St., Adrian 49221
C. L. McDougall, MD, 601 W. Chisholm St., Alpena 49707
Walter D. Meester, MD, 1840 Wealthy St., S.E., Grand Rapids 49506
Richard B. Merkle, MD, 3535 W. 13 Mile Rd., Royal Oak 48072
Dorothy M. Mikat, MD, Pontiac General Hosp., Pontiac 48053
Candida C. Misra, MD, 2933 E. Bradford, Birmingham 48010
Arturo L. Mojares, MD, 31112 Pickwick Ln., Birmingham 48009
Demetrio N. Nasol, MD, 20503 Dequinder, Detroit 48234
David C. Nolan, MD, 432 E. Hancock, Detroit 48201
Mustafa E. Ovacik, MD, 1130 Hill St., Ann Arbor 48104
Lewis D. Rickman, MD, 14 Howard St., Mt. Clemens 48043
George Ritter, MD, 28245 Southfield Rd., Lathrup Village 48076
I. Enrique Romero, MD, 532 Eastland Ctr. Prof. Bldg., Detroit 48225
Donald L. Salva, MD, 753 N. Monroe St., Monroe 48161
Alicia C. Sandoval, MD, Detroit General Hospital, Detroit 48226
Manuel I. Santos, MD, 36616 Plymouth Rd., Livonia 48150
Martin J. Seldon, MD, 3750 Woodward Ave., Detroit 48201
Frank E. Taormina, MD, 191 North Ave., Mt. Clemens 48043
Norman W. Thoms, MD, 1400 Chrysler Expwy., Detroit 48207
Thelma T. Tumacder, MD, Detroit General Hospital, Detroit 48226
Richard H. Walker, MD, 3601 W. 13 Mile Rd., Royal Oak 48072
Malcolm L. Weckstein, MD, Henry Ford Hospital, Detroit 48202
Richard Weiner, MD, 20211 Greenfield, Detroit 48235
Howard S. Wharton, MD, Health Center, WMU, Kalamazoo 49001
Nacianceno V. Woo, MD, 785 N. Lapeer Rd., Lake Orion 48035
Charles E. Yee, MD, 5790 M-15, Clarkston 48016
Luis H. Munoz, MD, Pontiac State Hosp., 140 Elizabeth Lake Road, Pontiac 48053
Vicente T. Ng Tsai, MD, Pontiac General Hospital, Pontiac 48053
Selcuk M. Ozil, MD, Plymouth State Home, Northville 48167
James D. Panzer, MD, Upjohn Co., Kalamazoo 49006
Oguz K. Ramadan, MD, 238 W. Caroline St., Fenton 48430
Peter J. Stephens, MD, 175 College St., Battle Creek 49017
Errol R. Sweet, MD, 1076 Island Dr. Ct. #104, Ann Arbor 48105
Jimmie J. VerLee, MD, Pontiac General Hospital, Pontiac 48053
Rady I. Villaflor, MD, 4851 Burnley Dr., Bloomfield Hills 48013
Thomas G. Wadsworth, FRCS, 1810 Wealthy St., S.E., Grand Rapids 49506
Jonathan E. Walker, MD, R-5022 Kresge Bldg., Ann Arbor 48104

Abortion . . .

and Michigan doctors' experiences with it were the subject of an important article published in the April issue of **Michigan Medicine.** If you read that article, perhaps you also saw the contributions on the "peer review picture," written by Beverly C. Payne, MD, of Ann Arbor, and the opinion pieces by several Michigan physicians about the centralization of health services. If you missed those articles, you can still find them in the April issue of **Michigan Medicine.**

Michigan teachers seeking standards comparable to other professions'

By Melvin Leasure
President
Michigan Education Association

The medical profession in Michigan exercises responsibility for those who enter the practice of medicine. A state board of M.D. s examines candidates for licensing, investigates current practitioners when circumstances warrant it, and exercises powers, including denial and revocation of licenses.

The teaching profession in Michigan has nothing comparable. Teachers are professionally in about the same position physicians would be in if an M.D. candidate received a license to practice along with his M.D. degree and if passing judgment later on his competence was up to lay boards.

Teachers want — and are seeking — what physicians have: the right to a measure of self government. The time to get what they want is now. More and more the public is demanding accountability from teachers as teachers' salaries rise to professional levels.

Teachers are now willing to be held accountable, but they cannot be held accountable as long as they, as a profession, cannot exercise responsibility for standards of practice in their profession. They can recognize incompetence in a classroom down the hall, but without authority, they can accept no responsibility for its presence.

A proposed Professional Practices Act (PPA) now being worked on by representatives of teachers, administrators, school boards, and the public for consideration by the Legislature this session, will be designed to give the teaching profession the necessary authority and tools to exercise its proper responsibilities. This PPA proposal will be the product of many years of thought and effort.

Mr. Leasure

There have been other proposals. PPA efforts in the MEA, which can be identified as a prime mover for a PPA, go back for more than a decade.

What finally emerges as law will, of course, be up to the Michigan Legislature. But here is the shape of a PPA proposal that appears to be emerging for legislative consideration:

— Entry into the profession via a genuine intern program in a school district after graduation from a teacher preparation institution.

— Evaluation by a local performance panel on the basis of performance during the intern period and recommendation either for certification or noncertification. The panel would be comprised of practicing educators.

— Granting of certification, as well as investigation of current practitioners, and powers of revoking certification placed in the hands of a state commission. The appointees to this commission would all be professional educators, the preponderance of whom would be practicing classroom teachers.

The similarities between this proposal and procedures governing entry and practice in the medical profession are obvious. In formulating our proposal we have studied carefully procedures in medicine to borrow ideas and benefit from helpful experience — recognizing, of course, the differences that exist between the two professions.

We hope for success, encouragement from other professionals such as you, and support from the public. As matters now stand, teachers live in a professional anarchy which hurts everyone — both the ethical, competent practitioners and the public they are sworn to serve.

To legally be a profession means by definition for the individual practitioners to be held legally accountable to the organized group of practitioners.

So you're starting medical practice!

This checklist will help you make your debut a graceful one.

(Prepared with the advice of MSMS legal counsel)

1. Obtain a license to practice in Michigan from the Michigan State Board of Registration in Medicine, Department of Licensing and Regulation, State of Michigan, 1033 S. Washington Ave., Lansing. Fee for obtaining license by examination is $75, on endorsement of another state, $100.

2. File for Federal Narcotics License with the Office of the Director of Internal Revenue. The fee is $1 with annual renewal.

3. If you have one or more full or part-time employees, obtain (a) employer's account number from the Social Security Administration regional office; (b) employee federal withholding tax number from the District Director of Internal Revenue; (c) employer's account number from the Michigan Unemployment and Workmen's Compensation Bureaus; (d) workmen's compensation insurance, obtainable through any general insurance agent; (e) employer's account number from municipality if local area has an income tax, or if school district levies a wage tax, and (f) information on Blue Cross-Blue Shield protection and group insurance for employees.

4. Arrange for professional liability (malpractice) and comprehensive personal and office liability insurance. Develop relations with a professional insurance broker or agent and obtain counsel on your other insurance needs; the building of an insurance estate; fire insurance; loss and employee bond insurance.

5. Obtain or establish a detailed, comprehensive system for patient records—one of your most vital office requirements. Consider an augmenting oral dictation machine.

6. Establish a bookkeeping system and arrange for the printing of stationery, including letterheads, invoices or statements, appointment cards, patient records, account cards.

7. Obtain professional evaluation of the value to you of forming a "professional corporation."

8. Arrange for the distribution of announcement cards and for a listing in the telephone directory in accordance with society regulations and custom in the area.

9. Arrange for signs, plaques, and lettering on the doors or entry of your office in keeping with good taste and local practice or in accord with society-prescribed standards.

10. Check availability of telephone answering service, or a medical bureau which includes telephone service, and any approved collection agency.

11. Improve your understanding of the business and public relations aspects of medical practice. Helpful are some of the booklets named in the materials list and publications of the AMA, such as "The Business Side of Medical Practice." In addition, more extensive literature covering such items as taxes and wills may be obtained from the AMA Law Division.

12. Proceed methodically to develop an understanding of the community where you will practice, and to learn about its medical facilities including specialty societies, hospitals and clinics, other health institutions, nursing services, public and volunteer health agencies and public health authorities, etc.

13. Prepare to take part in your county society's public service activities, including duty in the emergency service program, and to be an active member of one or more of the society committees. Also, develop the habit of attending the society meetings and becoming recognized as a participating and sustaining member.

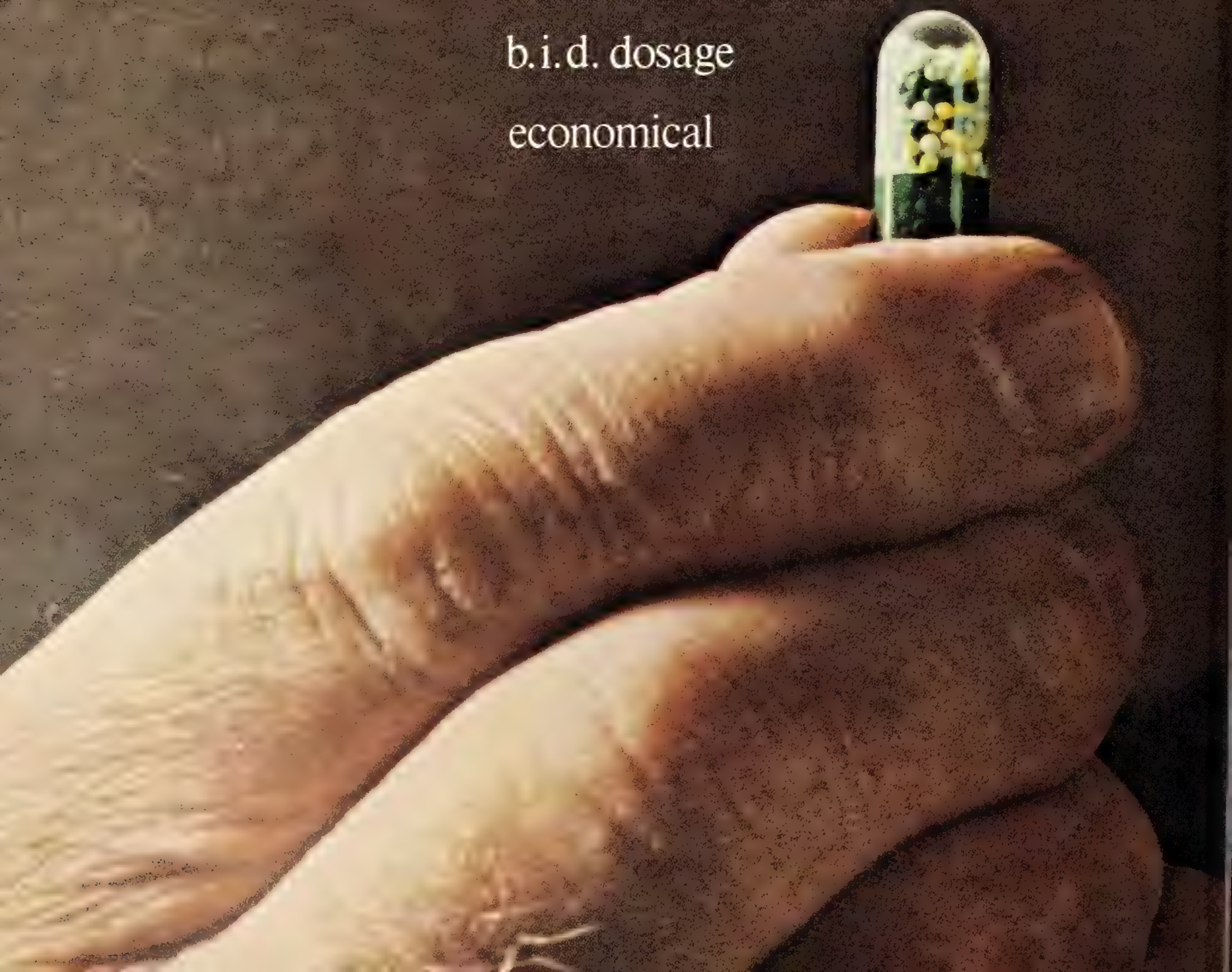
14. Check to see if a zoning permit is needed for your office location.

15. Become acquainted with a medical equipment supply house.

16. Check to see if a mercantile tax is required.

The advertising in
MICHIGAN MEDICINE
keeps you informed
and helps pay the
publishing costs.

When the local
representative calls, Doctor,
tell him you saw
his company's ad
in your journal.



new NICOBID™

niacin, Armour

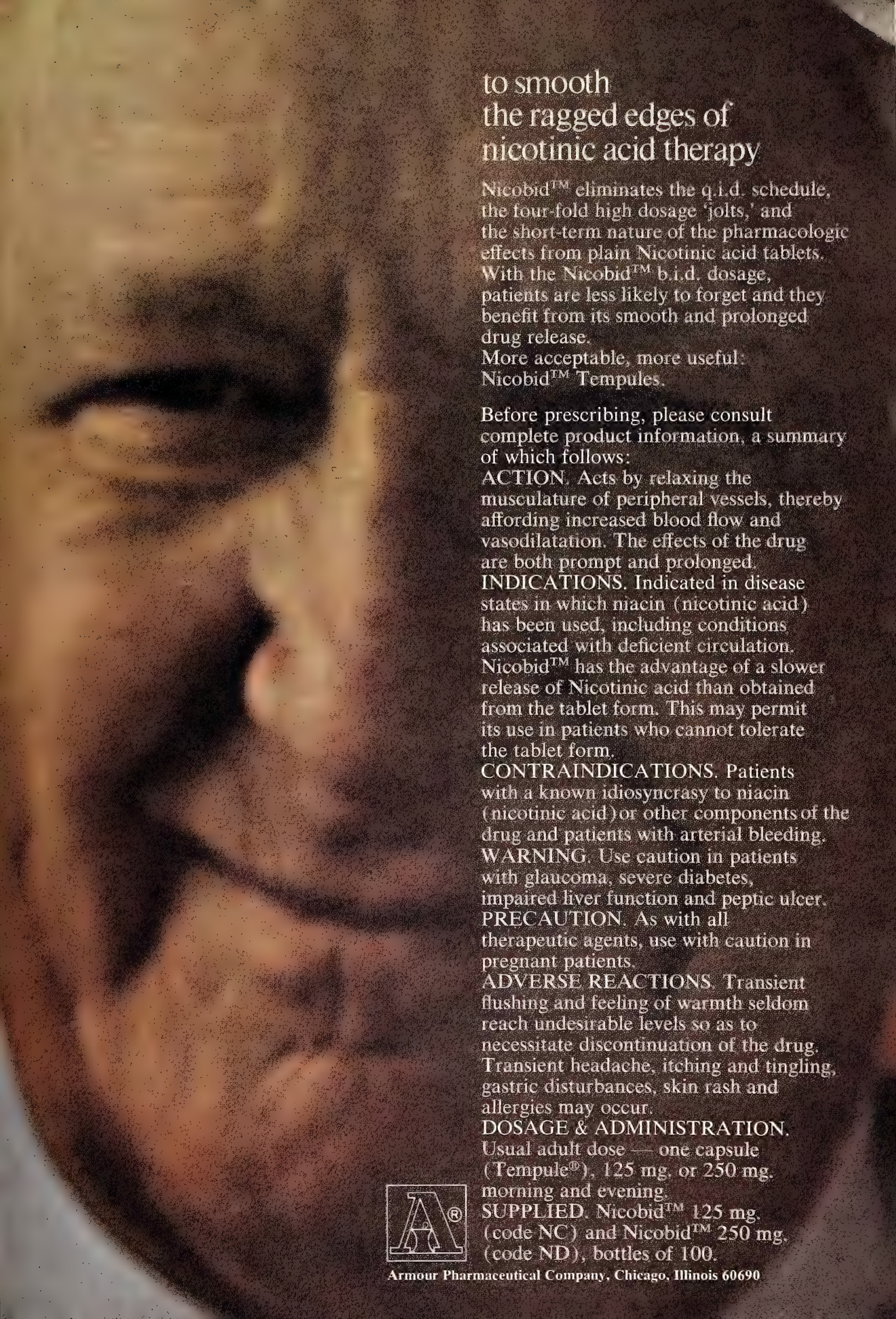
makes nicotinic acid more useful for more patients who require vasodilatation

Timed release Nicotinic acid Tempules® • A big improvement over the old tablet form

smooth, prolonged action

b.i.d. dosage

economical



to smooth the ragged edges of nicotinic acid therapy

Nicobid™ eliminates the q.i.d. schedule, the four-fold high dosage 'jolts,' and the short-term nature of the pharmacologic effects from plain Nicotinic acid tablets. With the Nicobid™ b.i.d. dosage, patients are less likely to forget and they benefit from its smooth and prolonged drug release.
More acceptable, more useful: Nicobid™ Tempules.

Before prescribing, please consult complete product information, a summary of which follows:
ACTION. Acts by relaxing the musculature of peripheral vessels, thereby affording increased blood flow and vasodilatation. The effects of the drug are both prompt and prolonged.
INDICATIONS. Indicated in disease states in which niacin (nicotinic acid) has been used, including conditions associated with deficient circulation. Nicobid™ has the advantage of a slower release of Nicotinic acid than obtained from the tablet form. This may permit its use in patients who cannot tolerate the tablet form.
CONTRAINDICATIONS. Patients with a known idiosyncrasy to niacin (nicotinic acid) or other components of the drug and patients with arterial bleeding.
WARNING. Use caution in patients with glaucoma, severe diabetes, impaired liver function and peptic ulcer.
PRECAUTION. As with all therapeutic agents, use with caution in pregnant patients.
ADVERSE REACTIONS. Transient flushing and feeling of warmth seldom reach undesirable levels so as to necessitate discontinuation of the drug. Transient headache, itching and tingling, gastric disturbances, skin rash and allergies may occur.
DOSAGE & ADMINISTRATION. Usual adult dose — one capsule (Tempule®), 125 mg. or 250 mg. morning and evening.
SUPPLIED. Nicobid™ 125 mg. (code NC) and Nicobid™ 250 mg. (code ND), bottles of 100.

Armour Pharmaceutical Company, Chicago, Illinois 60690

Medico needs you, doctor!

Afghanistan — Algeria — the Dominican Republic — Honduras — Indonesia — Kenya — Malaysia — South Vietnam — Tunisia — if you are a Michigan physician volunteering your services to MEDICO, you may find yourself in any one of those foreign spots.

"Today . . . above all times of man—there is a need of concern—there is a need of compassion—there is a need of care," explains MEDICO founder Peter D. Comanduras, MD, in describing the need for U. S. doctors and nurses to volunteer their services through MEDICO.

Since MEDICO's founding in 1958, 19 Michigan physicians have served around the world, most of them for one or two month periods, some for as long as a year or two.

On the list are Richard Deming, MD, Jackson; Robert G. Braden, MD, Grosse Ile; Joseph Weiss, MD, Detroit; Reed O. Dingman, MD, Ann Arbor; Leland L. Swenson, MD, Muskegon; Alfred B. Swanson, MD, Grand Rapids; Alfred B. Srinivasan, MD, Birmingham; Paul Miller, MD, Detroit; Clarence Livingood, MD, Grosse Pointe; Nancy Caputo, MD, Grosse Pointe; Hira E. Branch, MD, Flint; Harold O. Smith, MD, Flint; Neil M. Koreman, MD, Detroit; George V. Leroy, MD, Detroit; C. Leslie Mitchell, MD, Detroit; Robin C. Buerki, MD, Detroit; Nelson M. Taylor, MD, Grosse Pointe, and Ferdinand Gaensbauer, MD, Pontiac.

MEDICO was founded by the late Thomas A. Dooley, MD, and its purpose is to share the benefits of modern medicine with needy nations throughout the world. It affiliated in 1962 with CARE, Inc.

Today a physician wishing to volunteer with MEDICO should contact the CARE-MEDICO World Headquarters, 660 First Ave., New York, N.Y. 10016. The physician will be sent by that office to whichever of the spots around the world his specialty is most needed.

Further information can also be obtained from the Detroit Field Office of CARE, Inc., located in the Guardian Building, 500 Griswold, Detroit, 48226. Other sources of information include Robin C. Buerki, MD, executive director, Henry Ford Hospital, West Grand Blvd. and Hamilton, Detroit, 48202, who is the current Michigan member of the national MEDICO board, and Reed O. Dingman, MD, 221 N. Ingalls St., Ann Arbor, who serves as a consultant to the national board.

Most Michigan doctors hear from MEDICO around Christmas time, when the MEDICO plan is promoted for donating funds to MEDICO in the name of a person to whom the donor would ordinarily give a gift.

But throughout the year, MEDICO heals the sick in underdeveloped nations and teaches modern medical practices to local physicians, nurses, technicians and physical therapists.

Among MEDICO's achievements in its first 10 years have been formation of the first eye bank in Jordan, the first neurosurgical training program on the mainland of Malaysia, a training program in plastic surgery for physicians in South Vietnam for restorative surgery on war victims and a training course for nursing assistants at the Hospital de Occidente in Santa Rosa de Copan, Honduras.

Midland doctors leading in community drug efforts

Six members of the Midland County Medical Society have formed a special committee to study methods by which the society can more effectively assist other community groups working with drug abuse problems. On the committee are Charles A. Schoff, MD; Arthur R. Basel, MD; Colleen E. Haberstroh, MD, chairman; Robert G. Bridge, MD; Peter Gay, MD, and Sidney N. Smock, MD. The committee hopes to call a meeting of medical members of the community, to refresh them on the local and national drug problem, and then bring together key community leaders in an attempt to coordinate their programs to assist drug abusers in Midland.

Population, medically-indigent topics of Washtenaw

Population planning and a free clinic for the medically indigent of the county have been the topics of discussion at recent Washtenaw County Medical Society meetings. Leonard Wolin, MD, has been appointed a representative to work with community leaders involved in meeting the family planning service needs in the county. He will be working with Leslie Corsa, MD, director of the Center for Population Planning. Winslow C. Fox, MD, chairman of the Washtenaw and MSMS committees on Medicine and Religion, gave a report on low-cost or no-cost medical services already available for the poor when he represented the county medical society recently before the Washtenaw County Coalition of Churches. The coalition is planning to sponsor a free clinic of medical services.

The girth control pill

Tepanil® Ten-tab®

(continuous release form)

diethylpropion hydrochloride, N.F.)

Vhen girth gets out of control, TEPANIL can provide sound upport for the weight control program you recommend. EPANIL reduces the appetite—patients enjoy food but eat ess. Weight loss is significant—gradual—yet there is a relavely low incidence of CNS stimulation.

ontraindications: Concurrently with MAO inhibitors, in patients hypersensitive to is drug; in emotionally unstable patients susceptible to drug abuse.

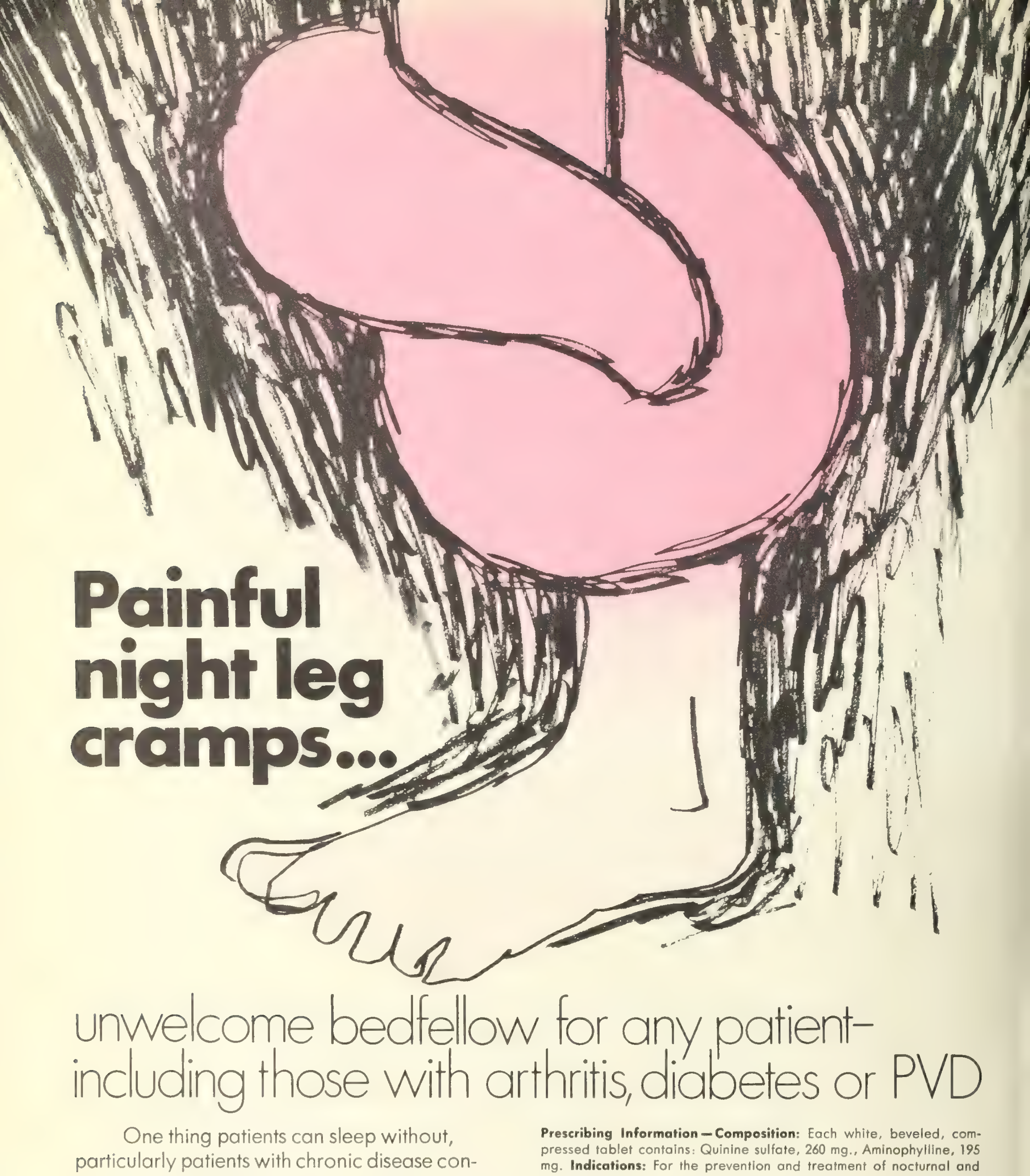
arning: Although generally safer than the amphetamines, use with great caution in atients with severe hypertension or severe cardiovascular disease. Do not use durg first trimester of pregnancy unless potential benefits outweigh potential risks.

dverse Reactions: Rarely severe enough to require discontinuation of therapy, uneasant symptoms with diethylpropion hydrochloride have been reported to occur relatively low incidence. As is characteristic of sympathomimetic agents, it may casionally cause *CNS effects* such as insomnia, nervousness, dizziness, anxiety, and jitteriness. In contrast, CNS depression has been reported. In a few epileptics an increase in convulsive episodes has been reported. Sympathomimetic *cardiovascular effects* reported include ones such as tachycardia, precordial pain, arrhythmia, palpitation, and increased blood pressure. One published report described T-wave changes in the ECG of a healthy young male after ingestion of diethylpropion hydrochloride; this was an isolated experience, which has not been reported by others. *Allergic phenomena* reported include such conditions as rash, urticaria, ecchymosis, and erythema. *Gastrointestinal effects* such as diarrhea, constipation, nausea, vomiting, and abdominal discomfort have been reported. Specific reports on the hematopoietic system include two each of bone marrow depression, agranulocytosis, and leukopenia. A variety of miscellaneous adverse reactions have been reported by physicians. These include complaints such as dry mouth, headache, dyspnea, menstrual upset, hair loss, muscle pain, decreased libido, dysuria, and polyuria.

Convenience of two dosage forms: TEPANIL Ten-tab tablets: One 75 mg. tablet daily, swallowed whole, in midmorning (10 a.m.); TEPANIL: One 25 mg. tablet three times daily, one hour before meals. If desired, an additional tablet may be given in midevening to overcome night hunger. Use in children under 12 years of age is not recommended.

T-107/4/71/U.S. PATENT NO. 3,001,910

THE NATIONAL DRUG COMPANY
DIVISION OF RICHARDSON-MERRELL INC
PHILADELPHIA, PENNSYLVANIA 19144



Painful night leg cramps...

unwelcome bedfellow for any patient–
including those with arthritis, diabetes or PVD

One thing patients can sleep without, particularly patients with chronic disease conditions such as arthritis, diabetes or PVD, is painful night leg cramps. Although seldom the presenting complaint, night leg cramps can tie your patients up in painful knots. Now, just one tablet of QUINAMM at bedtime can usually bring an end to shattered sleep and needless suffering. Your patients will sleep restfully—gratefully—with QUINAMM, specific therapy to prevent painful night leg cramps.

Prescribing Information—Composition: Each white, beveled, compressed tablet contains: Quinine sulfate, 260 mg., Aminophylline, 195 mg. **Indications:** For the prevention and treatment of nocturnal and recumbency leg muscle cramps, including those associated with arthritis, diabetes, varicose veins, thrombophlebitis, arteriosclerosis and static foot deformities. **Contraindications:** QUINAMM is contraindicated in pregnancy because of its quinine content. **Precautions/Adverse Reactions:** Aminophylline may produce intestinal cramps in some instances, and quinine may produce symptoms of cinchonism, such as tinnitus, dizziness, and gastrointestinal disturbance. Discontinue use if ringing in the ears, deafness, skin rash, or visual disturbances occur. **Dosage:** One tablet upon retiring. Where necessary, dosage may be increased to one tablet following the evening meal and one tablet upon retiring. **Supplied:** Bottles of 100 and 500 tablets.

THE NATIONAL DRUG COMPANY
DIVISION OF RICHARDSON-MERRELL INC.
PHILADELPHIA, PENNSYLVANIA 19144

Quinamm™
(quinine sulfate 260 mg., aminophylline 195 mg.)

Specific therapy for night leg cramps

MSMS news

Judicial Commission against abortion solicitation

The MSMS Judicial Commission, concerned with the activities of the Michigan Family Planning Service, an abortion referral service located in Oakland County, has adopted a statement alerting MSMS members to the service.

The Family Planning Service advertises its help in getting physicians' patients to states where abortions are legal. Its advertising is mailed to all physicians' offices.

The service is not run by a physician, the Judicial Commission notes. Moreover, the commission "is extremely opposed to such solicitation," according to its statement.

"We feel," writes Donald N. Sweeny, Jr., MD, Detroit, commission chairman, "that the position of the county medical societies against such solicitation would be strengthened if every physician who objects would complain directly to the societies."

Following is a copy of the AMA Judicial Council statement on the subject of such abortion referral services:

"The Judicial Council, in the strongest terms possible, condemns the commercialization of the medical procedure of abortion.

"Regardless of one's convictions concerning abortion, either therapeutic or economic, all must unite in protesting commercialization and hucksterism in this sensitive area.

"Even though laws have been liberalized and abortions are permitted for therapeutic or other reasons, the procedure remains a medical procedure. If it is to be done, it must be done strictly in accord with the highest standards of medical practice. The rights of the patient must be respected and ethical principles observed just as in any other medical procedure.

"The ethical principle remains: no physician may solicit patients. A physician may not do indirectly that which he may not do directly. He may not permit others to solicit patients for him.

"The medical profession, county and state medical societies, and also the public must cooperate to preserve and protect the highest standards of medical practice in all its aspects. The establishment of abortion mills must not be permitted."

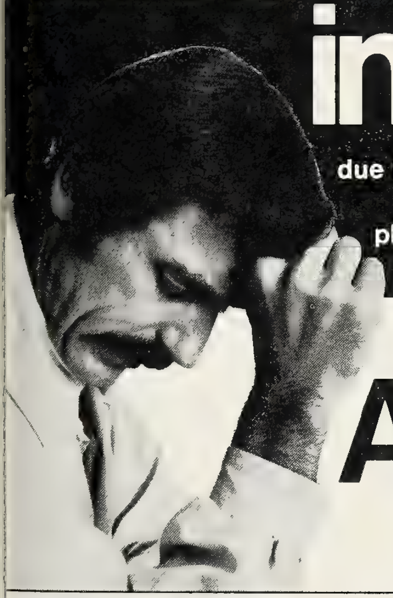
The treatment of

impotence

due to androgenic deficiency in the American male. The concept of chemotherapy plus the physician's psychological support is confirmed as effective therapy.

NEW CLINICAL STUDY

The Treatment of Impotence with Methyltestosterone Thyroid (100 patients — Double Blind Study) T. Jakobovits. Fertility and Sterility, January 1970 Official Journal of the American Fertility Society



Android®

(thyroid-androgen) tablets

Double-Blind Study and Type of Patient:

100 patients suffering from impotence. Of the patients receiving the active medication (Android) a favourable response was seen in 78%. This compares with 40% on placebo. Although psychotherapy is indicated in patients suffering from functional impotence the concomitant role of chemotherapy (Android) cannot be disputed.

Choice of 4 strengths:

Android	**Android-HP**	**Android-X**	**Android-Plus**
	HIGH POTENCY	EXTRA HIGH POTENCY	WITH HIGH POTENCY B-COMPLEX AND VITAMIN C
Each yellow tablet contains:	*Each red tablet contains:*	*Each orange tablet contains:*	*Each white tablet contains:*
Methyl Testosterone ..2.5 mg. Thyroid Ext. (1/6 gr.) ..10 mg. Glutamic Acid ....50 mg. Thiamine HCL ....10 mg.	Methyl Testosterone ..5.0 mg. Thyroid Ext. (½ gr.) ...30 mg. Glutamic Acid ....50 mg. Thiamine HCL ....10 mg.	Methyl Testosterone .12.5 mg. Thyroid Ext. (1 gr.) ....64 mg. Glutamic Acid ....50 mg. Thiamine HCL ....10 mg.	Methyl Testosterone ..2.5 mg. Thyroid Ext. (¼ gr.) ...15 mg. Ascorbic Acid (Vit. C) .250 mg. Thiamine HCL ....25 mg. Glutamic Acid ....100 mg. Pyridoxine HCL ....5 mg. Niacinamide ....75 mg. Calcium Pantothenate .10 mg. Vitamin B-12 ....2.5 mcg. Riboflavin ....5 mg.
Dose: 1 tablet 3 times daily.	*Dose:* 1 tablet 3 times daily.	*Dose:* 1 or 2 tablets daily.	*Dose:* 2 tablets daily.
Available: Bottles of 100, 500, 1000.	*Available:* Bottles of 100, 500, 1000.	*Available:* Bottles of 60, 500.	*Available:* Bottles of 60, 500.

REFER TO PDR

Contraindications: Android is contraindicated in patients with prostatic carcinoma, severe cardiorenal disease and severe persistent hypercalcemia, coronary heart disease and hyperthyroidism. Occasional cases of jaundice with plugging biliary canaliculi have occurred with average doses of Methyl Testosterone. Thyroid is not to be used in heart disease and hypertension.

Warnings: Large dosages may cause anorexia, nausea, vomiting abdominal pain, diarrhea, headache, dizziness, lethargy, paresthesia, skin eruptions, loss of libido in males, dysuria, edema, congestive heart failure and mammary carcinoma in males.

Precautions: If hypothyroidism is accompanied by adrenal insufficiency the latter must be corrected prior to and during thyroid administration.

Adverse Reactions: Since Androgens, in general, tend to promote retention of sodium and water, patients receiving Methyl Testosterone, in particular elderly patients, should be observed for edema.

Hypercalcemia may occur, particularly in immobilized patients: use of Testosterone should be discontinued as soon as hypercalcemia is detected.

References: 1. **Montesano, P., and Evangelista, I.** Methyltestosterone-thyroid treatment of sexual impotence. Clin Med 12:69, 1966. 2. **Dublin, M. F.** Treatment of impotence with methyltestosterone-thyroid compound. West Med 5:67, 1964. 3. **Titeff, A. S.** Methyltestosterone-thyroid in treating impotence. Gen Prac 25:6, 1962. 4. **Hellman, L., Bradlow, H. L., Zumoff, B., Fukushima, D. K., and Gallagher, T. F.** Thyroid-androgen interrelations and the hypocholesteremic effect of androsterone. J Clin Endocr 19:936, 1959. 5. **Farris, E. J., and Colton, S. W.** Effects of L-thyroxine and liothyronine on spermatogenesis. J Urol 79:863, 1958. 6. **Osol, A., and Farrar, G. E.** United States Dispensatory (ed. 25). Lippincott, Philadelphia, 1955, p. 1432. 7. **Wershub, L. P.** Sexual Impotence in the Male. Thomas, Springfield, Ill., 1959, pp. 79-99.

rite for literature and samples: BROWN **THE BROWN PHARMACEUTICAL CO., INC.** 2500 West 6th Street, Los Angeles, California 90057

"Exploring health careers" growing business for Ingham, Wayne high schoolers

The Michigan Health Council's health career programs for high school students continue to gain momentum.

During the 1970-71 school year two new programs were begun in Ingham County and Detroit schools. A third program, also in Detroit schools, will be greatly expanded this summer, due to its successful reception by hospitals, schools and supporting agencies.

Back in the summer of 1969, the Health Council developed a Summer Exploratory Experience program for Detroit inner-city students. With the guidance of a school coordinator, the students went to classes a half-day, to learn about health careers, and worked in various Detroit hospitals for another half-day.

That program has continued each summer, drawing on the members of the Medical Careers Clubs at Northwestern and Martin Luther King High Schools. This summer, according to John A. Doherty, Health Council executive vice president, about 160 students will take part, the program will be expanded to Kettering and Southeastern High Schools and 25 Detroit hospitals will cooperate in exposing the students to health careers. Last summer, 10 hospitals participated and four cooperated the first summer.

The highly-successful SEE summer program in Detroit has brought inquiries from the Oakland and Macomb County Medical Societies, from Plymouth and Westland school systems, who all want to start similar programs.

The Chrysler Corp., Model Cities Program and State Department of Education have supported that SEE program so far, and a proposal for funds has been made to the United Community Services Council of Detroit for its support.

An offshoot of the SEE program has taken shape during this school year at Northwestern High School. About 30 students there are now involved in a year-round health careers cooperative program, with 15 of the students holding down part-time jobs in hospitals, medical and dental offices, laboratories, pharmacies, nursing homes and other medical and health facilities. They attend classes in the morning, including a medical careers class, and work on the job afternoons.

And in Ingham County, a SEE program got underway in December, with 40 students in 14 rural and parochial schools in the county taking part. They met one night a week for class work, then observed health personnel at work in local hospitals on Saturdays.

The Health Council hopes to make that program annual and perhaps even continue it through summers. The students involved have responded well, according to Mr. Doherty, and two of them have asked to spend a day at University Hospital in Ann Arbor due to their heightened interest.

Wayne County medical examiner forms cardiac registry

The office of the Medical Examiner of Wayne County in Detroit has formed a new Michigan Cardiac Registry to serve as a diagnostic center and anatomical repository.

The new registry will provide a service to those physicians who want to record interesting heart cases. The registry will collect specimens from the Wayne County Medical Examiner's Office, including all operating room deaths and all sudden and unexpected deaths in Wayne County.

The registry, founded by the office "because of the inherent availability of usual and unusual specimens from a large population and a large area for storage," will also provide for the entry of any specimen from the state from any osteopath or medical doctor, provide a useful pool of anatomical specimens and data for interested physicians in the locality and provide for national consultation in cases of interest.

Emergency health care becoming organized under local councils

A series of local emergency medical services councils is being established in Michigan, following a plan set up in 1965 by the American Medical Association's Commission on Emergency Medical Services.

The first to organize in Michigan was the Washtenaw County Emergency Medical Services Council. That was followed by the establishment of the Michigan Emergency Services Health Council, to provide pertinent information to the local councils and to serve as a liaison between the local councils and the governor's office.

Most recently, the Tri-County Emergency Medical Services Council serving Eaton, Clinton and Ingham counties was formally organized in Lansing.

The Kent County Medical Society's Emergency Medical Services Committee performs a similar function and the Upper Peninsula Comprehensive Health Planning Association is conducting a detailed study of emergency health care needs for the entire region under a grant of $15,000 from the state. The study will continue until June.

By encouraging the proliferation of the local councils, the AMA is leading a national effort to upgrade emergency medical care and reduce the number of needless accidental deaths.

The Councils are intended to be a community-wide effort, and the new Tri-County Council, for example, represents 40 local agencies and interested groups. Chaired by John Wiegenstein, MD, Lansing, the board of directors includes the executive director of the Safety Council, an American Red Cross first aid instructor, a state police lieutenant, president of the Lansing Jaycees, an emergency room nurse, the president-elect of the Michigan Association of Osteopathic Physicians and Surgeons, a local fire chief, local hospital administrator, owner of a local ambulance company, a county civil defense director, and the south-central regional director of the Michigan Heart Association.

The first Michigan unit—the Washtenaw Council—was established in 1969. All others have followed since that time.

Charles Frey, MD, is chairman of the board of trustees of the Michigan Emergency Services Health Council, while Dwayne Freier is chairman of the Washtenaw Council.

The Washtenaw Council played a part in the passage of a stronger local ambulance ordinance, according to Doctor Frey. Passed in December following presentations by the emergency council before the county board of commissioners, the ordinance requires two persons in each ambulance, makes the first specifications of ambulance size and head room, and upgrades the training requirements of the attendants to include heart-lung resuscitation and a 70-hour course taught by the Ann Arbor Committee on Trauma of the American College of Surgeons.

Pharmacist to become doctor's drug consultant, WSU dean predicts

Martin Barr, Wayne State University College of Pharmacy dean, made the following predictions in a recent speech to the house of delegates of the Michigan State Pharmaceutical Association:

* the pharmacist will become a doctor's primary consultant on drugs;
* group pharmacy practices will develop, just like group medical practices;
* fees will be charged for services, rather than for medication, and those fees will be paid by a third party other than the patient;
* computers will record patient medication profiles for both prescription and nonprescription medicines in order to avoid drug interactions.

Dean Barr's speech was printed in the March 13 *Congressional Record* at the request of Senator Hubert H. Humphrey of Minnesota.

Family practice center opens in Saginaw

A third Family Practice Center for Michigan opened in late January in Saginaw, following those already established in Midland and Lansing.

The center will provide medical experience during three-year terms that will enable the physician to function as a specialist in family practice and to qualify him for examination in the American Board of Family Practice. Saginaw already has a Family Practice Residency program within local hospitals, which attracted 20 applicants for the six positions on the present staff.

Roy J. Gerard, MD, has the dual role of director of the Family Practice Center and Family Practice Residency program.

(Continued on Page 475)

Precision is a natural goal when you prescribe thyroid replacement therapy.

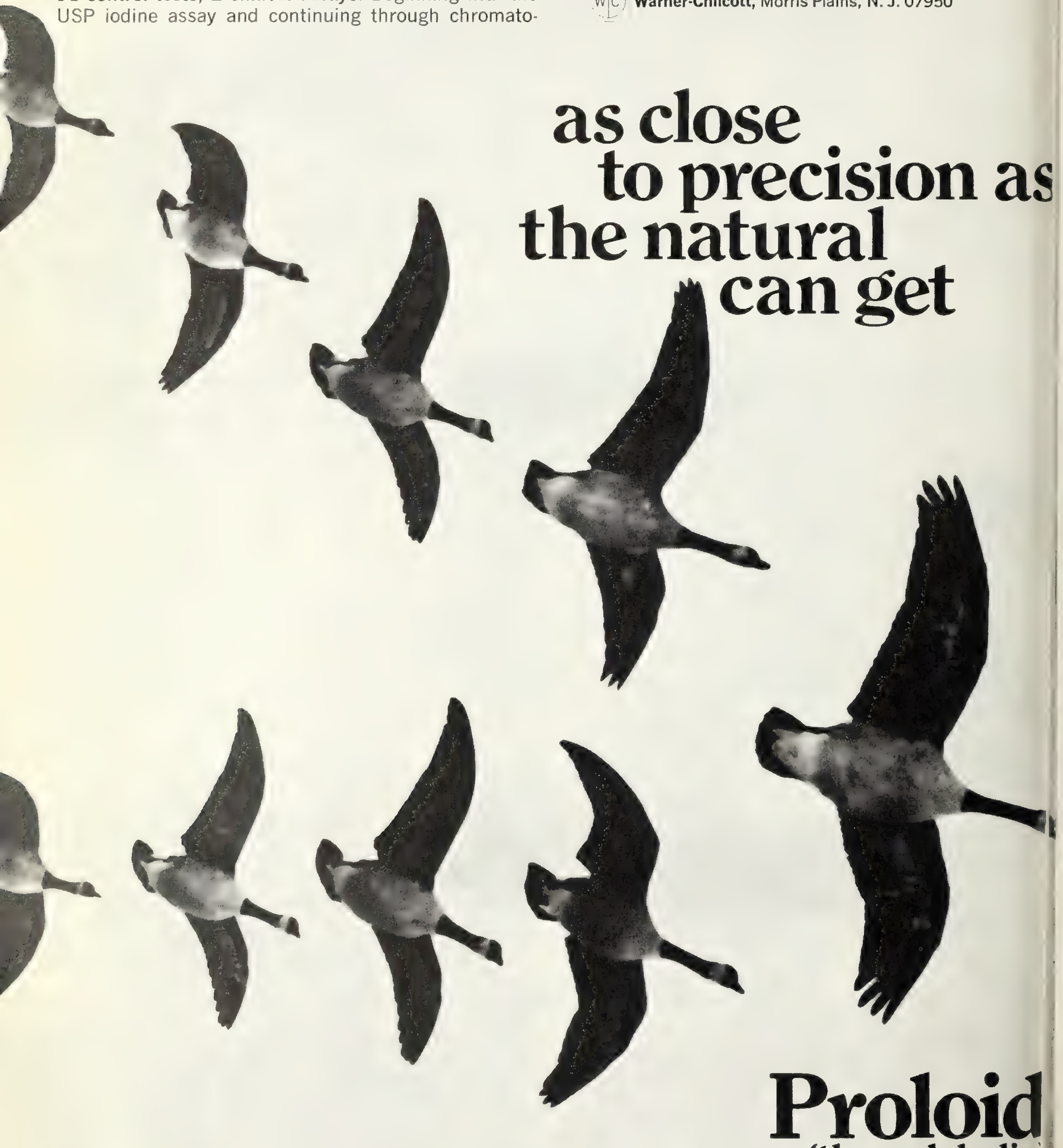
When you prescribe Proloid (thyroglobulin) you specify a precision blend of the two natural active hormones—T_4 and T_3—in their natural protein, *thyroglobulin.*

It's because Proloid is the natural thyroid hormone-globulin complex extracted and purified of unnecessary glandular debris.

91 control tests, 2 clinical assays: Beginning with the USP iodine assay and continuing through chromatographic analysis for T_4 and T_3 content and including testing in hypothyroid humans—Proloid is made as precise as the natural product can get, batch after batch.

New 2 grain tablet: Precision extends to dosage. With the introduction of a new 2 grain tablet, titration can be even more conveniently achieved with the full range of Proloid dosages: *¼, ½, 1, 1½, the new 2, 3, and 5 grain tablets.*

W|C **Warner-Chilcott,** Morris Plains, N. J. 07950



PR-GP-12-B&W

Proloid® (thyroglobulin)

Description: Proloid (thyroglobulin) is obtained from a purified extract of frozen hog thyroid. It contains the known calorigenically active components, sodium levothyroxine (T_4) and sodium liothyronine (T_3). Proloid (thyroglobulin) conforms to the primary USP specifications for desiccated thyroid—for iodine based on chemical assay—and is also biologically assayed and standardized in animals.

Chromatographic analysis to standardize the sodium levothyroxine and sodium liothyronine content of Proloid (thyroglobulin) is routinely employed.

The ratio of T_4 and T_3 in Proloid (thyroglobulin) is approximately 2.5 to 1.

Proloid (thyroglobulin) is stable when stored at usual room temperature.

Indications: Proloid (thyroglobulin) is thyroid replacement therapy for conditions of inadequate endogenous thyroid production: *e.g.*, cretinism and myxedema. Replacement therapy will be effective only in manifestations of hypothyroidism.

In simple (nontoxic) goiter, Proloid (thyroglobulin) may be tried therapeutically, in nonemergency situations, in an attempt to reduce the size of such goiters.

Contraindication: Thyroid preparations are contraindicated in the presence of uncorrected adrenal insufficiency.

Warnings: Thyroglobulin should not be used in the presence of cardiovascular disease unless thyroid-replacement therapy is clearly indicated. If the latter exists, low doses should be instituted beginning at 0.5 to 1.0 grain (32 to 64 mg) and increased by the same amount in increments at two-week intervals. This demands careful clinical judgment.

Morphologic hypogonadism and nephroses should be ruled out before the drug is administered. If hypopituitarism is present, the adrenal deficiency must be corrected prior to starting the drug.

Myxedematous patients are very sensitive to thyroid, and dosage should be started at a very low level and increased gradually.

Precaution: As with all thyroid preparations this drug will alter results of thyroid function tests.

Adverse Reactions: Overdosage or too rapid increase in dosage may result in signs and symptoms of hyperthyroidism, such as menstrual irregularities, nervousness, cardiac arrhythmias, and angina pectoris.

Dosage and Administration: Optimal dosage is usually determined by the patient's clinical response. Confirmatory tests include BMR, T_3 ^{131}I resin sponge uptake, T_3 ^{131}I red cell uptake, Thyro Binding Index (TBI), and Achilles Tendon Reflex Test. Clinical experience has shown that a normal PBI (3.5-8 mcg/100 ml) will be obtained in patients made clinically euthyroid when the content of T_4 and T_3 is adequate. Dosage should be started in small amounts and increased gradually with increments at intervals of one to two weeks. Usual maintenance dose is 0.5 to 3.0 grains (32 to 190 mg) daily.

Instructions for Use: The following conversion table lists the approximate equivalents of other thyroid preparations to Proloid (thyroglobulin) when changing medication from desiccated thyroid, T_4 (sodium levothyroxine), T_3 (sodium liothyronine), or T_4/T_3 (liotrix).

Dose of Proloid (thyroglobulin)	Dose of desiccated thyroid	Dose of T_4 (sodium levothyroxine)	Dose of T_3 (sodium liothyronine)	Dose of liotrix (T_4/T_3)
1 grain	1 grain	0.1 mg	25 mcg	#1 (60 mcg/15 mcg)
2 grains	2 grains	0.2 mg	50 mcg	#2 (120 mcg/30 mcg)
3 grains	3 grains	0.3 mg	75 mcg	#3 (180 mcg/45 mcg)
4 grains	4 grains	0.4 mg	100 mcg	
5 grains	5 grains	0.5 mg	125 mcg	

In changing from Thyroid USP to Proloid (thyroglobulin), substitute the equivalent dose of Proloid (thyroglobulin). Each patient may still require fine adjustment of dosage because the equivalents are only estimates.

Overdosage Symptoms: Headache, instability, nervousness, sweating, tachycardia, with unusual bowel motility. Angina pectoris or congestive heart failure may be induced or aggravated. Shock may develop. Massive overdosage may result in symptoms resembling thyroid storm. Chronic excessive dosage will produce the signs and symptoms of hyperthyroidism.

(Treatment: In shock, supportive measures should be utilized. Treatment of unrecognized adrenal insufficiency should be considered.)

How Supplied: ¼ grain; ½ grain; scored 1 grain; 1½ grain; 3 grain; and scored 5 grain tablets, in bottles of 100 & 1000; and scored 2 grain tablets in bottles of 100.

Warner-Chilcott, Morris Plains, N. J. 07950

'Exchange of ideas' most satisfactory result of family practice club

Family Practice Clubs (at Wayne it's called a Forum) are now in operation at all three of Michigan's medical schools. Below, the purpose and organization of the U-M club are described.

* * *

The Family Practice Club at the University of Michigan is an organization of medical students and physicians who practice family medicine. The purpose of this club is to provide the medical students with an exposure to family practitioners and to also enable them to learn about our unique approach to providing primary and on-going comprehensive care for our patients.

The Michigan Academy of General Practice has been aware that the exposure to family practitioners, and the exchange of ideas with them, was at best minimal in our state medical schools. The academy learned of the success of family practice clubs at the medical schools in Indiana and Minnesota.

With this impetus and knowledge and under the leadership of James Dooley, MD, MAGP president, preliminary liaison meetings were held in the early fall of 1969 and the first club meeting occurred in October 1969. Two subsequent meetings were held in the academic year 1969-70. The programs were directed to the interests and concern of the medical students as expressed to us in our meetings with them.

The success of the Family Practice Club is attested to by tangible and gratifying results. The attendance has been sustained at a level of 150-200 participants (medical students and their wives and family physicians and their spouses). The medical students have taken over in a large measure the planning of the programs—which is proper and desirable. The Family Practice Club now enjoys official medical school sanction. Marion Laboratories, who underwrite the major expense for these clubs, has approved the funds for the Wayne Family Practice Club.

Most satisfying of all is the intimate exchange of ideas that occurs between students and family physicians after the formal part of the program is over, for it is then that the unanswered concerns and questions that the students pose are discussed and solutions explored.

AMA Medicredit Proposal

The following analysis of HR 4960 and S 987 is provided by the American Medical Association

Medicredit would: (1) pay the full cost of health insurance for those *too poor* to buy their own, (2) help those who can afford to *pay a part* —if not all—of their health insurance premium. The less they can afford to pay, the more the government would help out, (3) see to it that no American would have to bankrupt himself because of a long-lasting, catastrophic illness.

(This bill addresses itself only to *financing* health care; other legislation and programs involve medical manpower supply and distribution, delivery of health care, and other subjects.)

Federal Contribution

The government would pay 100% of the premium for low-income beneficiaries (an individual and his dependents whose combined income for a taxable year would not give rise to any income tax liability). For others, the Government would provide scaled participation ranging between 99% and 10%, favoring lower-income persons, in the payment of premiums for basic coverage, and would pay in full the premium for catastrophic expense coverage. A table of allowable percentages for related income tax liabilities is included in the bill.

The extent of participation would be determined with reference to federal income tax liability of an individual in a particular year (base year). A health care insurance policy, under this program, would run for a 12-month period beginning in the year following (benefit year).

Health Insurance Certificates; Income Tax Credits

A beneficiary eligible for full payment of premium by the Federal Government would be entitled to a certificate acceptable by carriers for health care insurance for himself and his dependents. Eligible beneficiaries with whom the Government would be sharing the cost of premium could elect between a credit against income tax or a certificate. The carrier would present certificates received in payment of premium to the Federal Government for redemption.

Qualification of Participating Carriers

To participate in the plan, a carrier would have to qualify under state law, provide certain basic coverage, make coverage available without pre-existing health conditions, and guarantee annual renewal. An assigned risk insurance pool among carriers would be utilized as appropriate.

Health Insurance Coverage

A qualified policy would offer comprehensive insurance against the ordinary and catastrophic expenses of illness. Basic benefits in a 12-month policy period would include 60 days of inpatient care in a hospital or extended care facility (but any two days in an extended care facility would count as one of the 60 days). Other basic benefits would provide emergency and outpatient services and all medical services provided by doctors of medicine or osteopathy. The catastrophic expense protection would pay incurred expenses for benefits in excess of the basic coverage, including hospital, extended care facility, inpatient drugs, blood, prosthetic appliances, etc.

Deductibles

A policy under this program will contain:

(A) Under the basic coverage—a deductible of $50 per hospital stay, and 20% coinsurance of the first $500 of medical expense and on the first 500 of emergency or outpatient expenses; and

(B) Under the catastrophic illness provisions —a corridor, between the basic coverage and the catastrophic illness coverage, of expenses to be incurred by the beneficiaries before payments under the catastrophic illness provisions would begin. The amount of the corridor would be based on taxable income (that is, net income after all tax deductions and personal exemptions): 10% on his first $4,000, 15% on the next $3,000, and 20% thereafter.

A family of four, having an adjusted gross income of $6,100, would have a taxable income (after all tax deductions) of $2,900. Its corridor would be 10% of $2,900, or $290.

Health Insurance Advisory Board

A health insurance advisory board of eleven members, a majority of whom shall be practicing physicians, and including the Secretary of HEW and the Commissioner of Internal Revenue and other persons qualified by virtue of education, training, or experience, would be appointed by the President with Senate consent. The board would establish minimum qualifications for carriers, and in consultation with carriers, providers and consumers, would develop programs to maintain the quality of care and effective utilization of available financial resources, health manpower, and facilities. It would report annually.

MAILBAG

Doctor Bryan adds own data on managing diabetics

Please convey my delight to Drs. Kohrman and Weil for their important point in their article in the March '71 issue of *Michigan Medicine* entitled "Insulin Requirements in Childhood Diabetes Mellitus." They have hit exactly on the head the problem which so frequently results in the truly infrequent situation called "brittle diabetes" of young people.

I would like to elaborate one bit more on one of the methods of reducing the chance for the swing from hypo- to hyperglycemia and briefly review a bit of history.

Fifteen and more years ago our group at Ford Hospital, including the late Bill Lowrie and Dr. Fred Whitehouse and Earl Redfern, thought that we could control 90% or more of our diabetics requiring insulin on a single morning injection of a mixed combination of short or long-acting insulin with an intermediate insulin. It seemed to us that we could "tailormake" a requirement in a patient's needs and for many years it looked as if it were a perfect answer to the problem of having an imperfect insulin for exogenous use.

However, as time goes by I am finding more and more improved management by splitting the dose of insulin, particularly of children, adolescents, young adults, and even some of our geriatric diabetics who act like "juvenile diabetics" using roughly ⅔ or ½ of the total daily depo requirement in the morning before breakfast and the remainder before supper or in the evening at night. This as Drs. Kohrman and Weil point out also reduces the chances for bouncing from hypo- to hyperglycemia and the tendency to push the dose of insulin on up to "cover" the hyperglycemia.

Again I am delighted that they have raised this very important point and congratulate them for their nice statement in the last issue of the *Journal.*

Respectfully yours,
John B. Bryan, MD
Royal Oak

Established 1924

MERCYWOOD HOSPITAL

4038 Jackson Road **Conducted by Sisters of Mercy** **Ann Arbor, Michigan**

Telephone — 313 663-8571

Mercywood Hospital is a private neuropsychiatric hospital licensed by the Michigan Department of Mental Health. Mercywood specializes in intensive, multi-disciplinary treatment for emotional and mental disorders.

Accredited by the Joint Commission on Accreditation of Hospitals and the National League of Nursing. A full Blue Cross participating hospital.

Certified for: Medicare and M.A.A. programs

PSYCHIATRIC STAFF

Lyle M. Allis, M.D.
Robert J. Bahra, M.D.
Dean P. Carron, M.D.
Francis M. Daignault, M.D.
Gordon C. Dieterich, M.D.
James R. Driver, M.D.
Alexander P. Dukay, M.D.
Robert L. Fransway, M.D.
Stuart M. Gould, Jr., M.D.
Leonard E. Himler, M.D.*
Sydney Joseph, M.D.
Hubert Miller, M.D.
Jacob J. Miller, M.D.
Rudolf Nobel, M.D.
Gerard M. Schmit, M.D.
Prehlad S. Vachher, M.D.
Richard D. Watkins, M.D.

*1904-1967

Doctors' wives from around Michigan met with their local legislators during luncheon at the annual MSMS Woman's Auxiliary Legislative Day recently in Lansing. Above, the Muskegon delegation exchanges views with Sen. Oscar Bouwsma (R-Muskegon).

The future of national health insurance was presented during morning talks at the workshop by James Imboden, assistant director, Department of Field Service, Public Affairs Division, the AMA. Later, he responded to the deep interest in the subject expressed by Mrs. Bernard Murphy, center, and Mrs. Phillip Richards, both of Jackson.

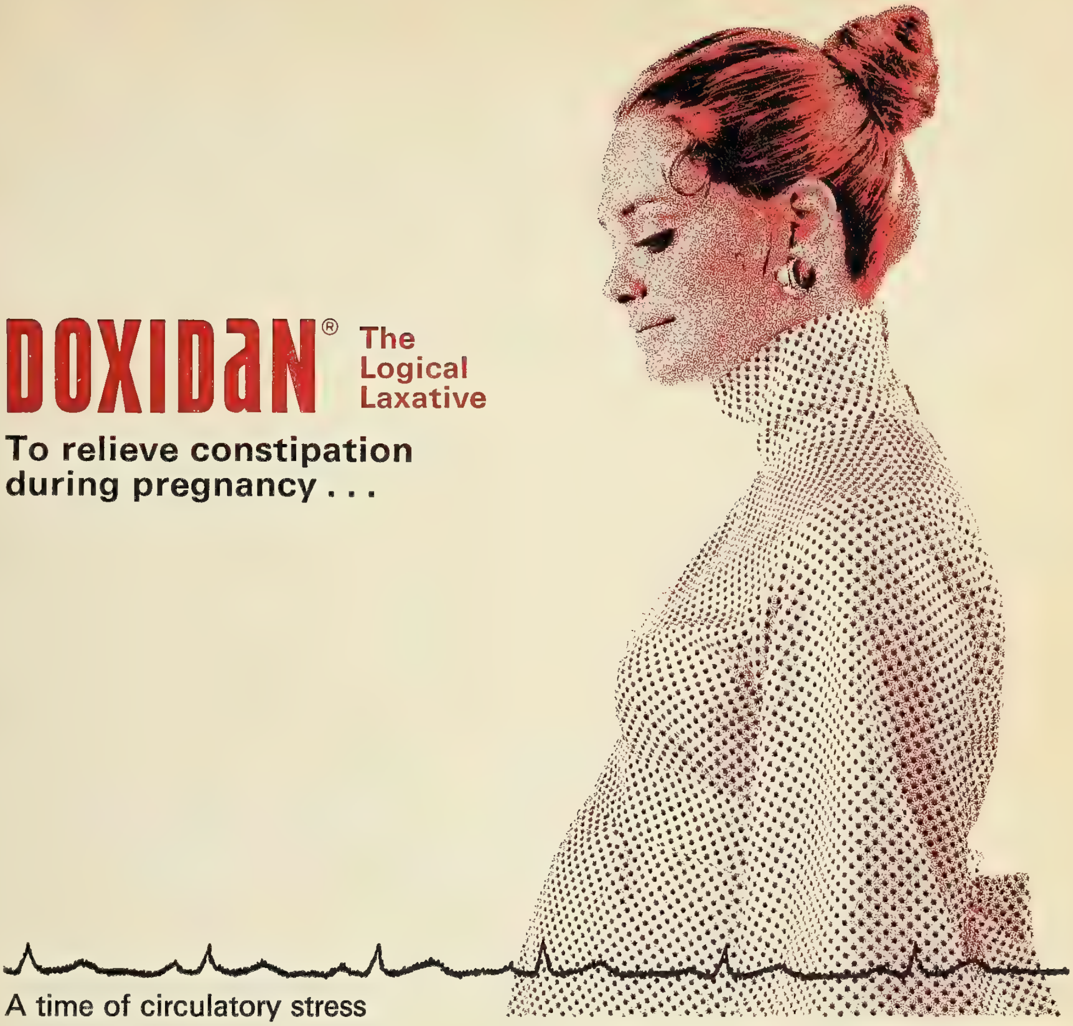
Mrs. Eli Igna, Grosse Pointe, right, is current legislative chairman of the Woman's Auxiliary, and thus was in charge of the Legislative Day. On the program was Francis P. Rhoades, MD, Detroit, who described pertinent state medical legislation. Mrs. Jackie Van Deventer, left, is MSMS staff assistant to the Woman's Auxiliary.

Wives of Owosso physicians, from left, Mrs. Phillip Moore, Mrs. John Hofstra and Mrs. Norman Bach, greeted their representative, R. Douglas Trezise, before luncheon began.

Auxiliary members meet their legislators

DOXIDAN® The Logical Laxative

To relieve constipation during pregnancy . . .



A time of circulatory stress

Doxidan gently relieves constipation in prepartum or postpartum patients and reduces the hemodynamic burdens of straining at stool.

gently . . . a highly effective fecal softener
predictably . . . a gentle peristaltic stimulant
economically . . . Doxidan costs less per effective dose*

Composition: Each capsule contains 50 mg. danthron N.F. and 60 mg. dioctyl calcium sulfosuccinate.

Dosage: Adults and children over 12—one or two capsules daily. Give at bedtime for two or three days or until bowel movements are normal.

Supplied: Bottles of 30, 100 (FSN 6505-074-3169) and 1000 (FSN 6505-890-1247).

DOXIDAN® The Logical Laxative

HOECHST
PHARMACEUTICAL CO.
Somerville, N.J. 08876 U.S.A.

C-143

*based on actual drug store survey of prescribed dosages.

Jackson society has new director

The Jackson County Medical Society has a new part-time director in Robert Swartley, who is also president of the Professional Business Bureau of Jackson. Mr. Swartley will conduct a continuing public relations program, liaison with the various community health agencies and recruitment of physicians for the Jackson society and will make regular reports to the board of directors.

Kalamazoo doctors to raise funds for HOPE

Kalamazoo Academy of Medicine members will be volunteering two hours of duty May 5 to solicit funds on the city streets for the local Rotary Club's Tag Day. The money raised will be contributed to the hospital ship Hope. Tens of thousands of dollars have been raised annually in Kalamazoo for the ship Hope on the annual Tag Days, when members of the medical and dental societies join in the campaign.

MSMS staff, Bay-area doctors examine foundations

The possibilities of establishing a United Foundation for Medical Care in the Bay County area were discussed at a major meeting March 16 of the Bay-Arenac-Iosco Counties Medical Society. Members of the Midland and Saginaw County Medical Societies, as well as several leaders of the MSMS staff heard representatives of the AMA and the successful California UFMC plans describe the foundations.

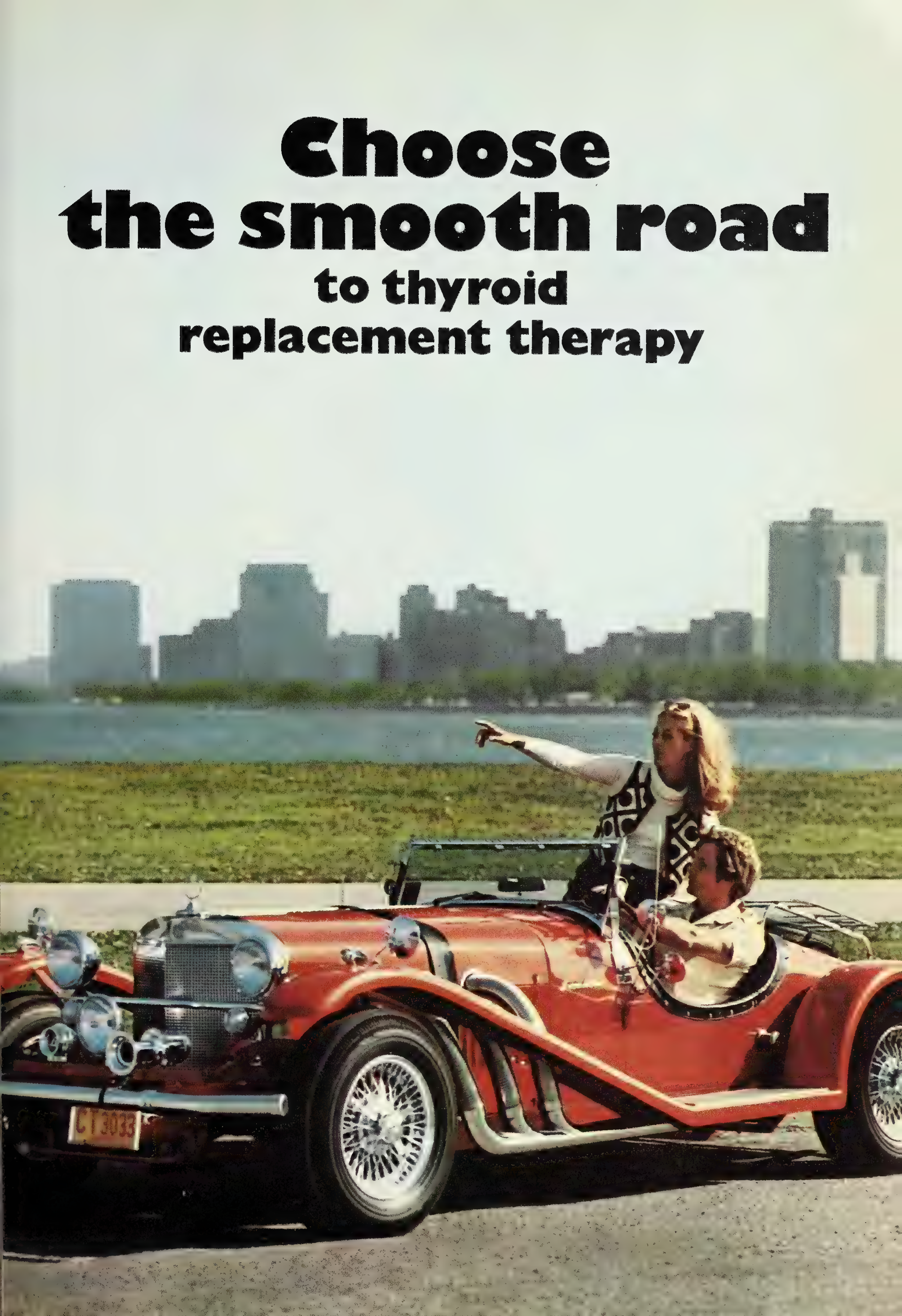
Also attending the meeting were Harold H. Hiscock, MD, Flint, MSMS president; Ross V. Taylor, MD, Jackson, chairman of the MSMS Council, and Vernon V. Bass, MD, Saginaw, speaker of the MSMS House.

The March 16 meeting was the first in Michigan to present the goals and organization of the medical foundations. The UFMC has 27 member foundations, 16 of them in California, and its board of trustees in February approved the incorporation of the American Association for Foundations of Medical Care. A UFMC is an appointive committee of a local medical society highly active in establishing and monitoring a sound health insurance program in its own area.

(Continued on Page 487)

Members of the Bay-Arenac-Iosco, Midland and Saginaw county medical societies gathered recently at Bay City to hear a program about medical foundations. Robert Gilles, third from left, described the work of the San Diego United Foundations. James Imboden, second from left, AMA assistant director of field service, discussed national legislation. Participating also on the program were Robert C. Prophater, MD, left, Bay City, 10th MSMS District Councilor; and John W. Grigg, MD, Bay president elect.

Exchanging views about the foundation movement are left to right, James F. Dooley, MD, president, Genesee County Medical Society; Harold Kwast, MD, president, Midland County Medical Society; Vernon V. Bass, MD, Saginaw, Speaker, MSMS House of Delegates; and Warren F. Tryloff, director, MSMS.


Choose
the smooth road
to thyroid
replacement therapy
CT 3033

The automati

transition.

Your patients start thyroid therapy smoothly, easily. They feel better all along the way with no metabolic "bumps."

The gradual physiologic action of T_4 SYNTHROID provides virtually an "automatic" transition through the range of complete thyroid replacement therapy.[1]

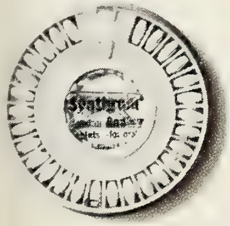
Predictably responsive!

This kind of comfortable patient response has made SYNTHROID the most widely prescribed brand of thyroid drug in the United States. It's a Cadillac of thyroid medications ...with Volkswagen economy.[2]

The road to normalized thyroid status is a continuous one. You make it smooth and economical with SYNTHROID.

1. The deiodination of T_4 to T_3 at the cellular level has been discussed in the literature. Reprints on the subject are available from the Flint Laboratories Medical Department. Use of T_4 alone therefore provides your patients with a natural hormone combination of T_3—T_4.
2. Patient cost of SYNTHROID is less than a penny a day more than desiccated thyroid. SYNTHROID costs patients nearly 50% *less* than the synthetic combination products: American Druggist BLUEBOOK, March 1970-71

Synthroid
(sodium levothyroxine)



FREE
MEDICATION DISPENSERS
TO START ALL YOUR PATIENTS ON SYNTHROID, IN THESE STRENGTHS:
0.05 mg. (white); 0.1 mg. (yellow); 0.15 mg. (violet); 0.2 mg. (pink).

seven color-coded strengths plus injectable

Indications: SYNTHROID (sodium levothyroxine) is specific replacement therapy for diminished or absent thyroid function resulting from primary or secondary atrophy of the gland, congenital defect, surgery, excessive radiation, or antithyroid drugs. Indications for SYNTHROID (sodium levothyroxine) **Tablets** include myxedema, hypothyroidism without myxedema, hypothyroidism in pregnancy, pediatric and geriatric hypothyroidism, hypopituitary hypothyroidism, simple (nontoxic) goiter, and reproductive disorders associated with hypothyroidism. SYNTHROID (sodium levothyroxine) **Injection** is indicated in myxedematous coma and other thyroid dysfunctions where rapid replacement of the hormone is required. When a patient does not respond to oral therapy, SYNTHROID (sodium levothyroxine) injection may be administered intravenously to avoid any question of poor absorption by either the oral or the intramuscular route.
Precautions: As with other thyroid preparations, an overdosage may cause diarrhea or cramps, nervousness, tremors, tachycardia, vomiting and continued weight loss. These effects may begin after four or five days or may not become apparent for one to three weeks. Patients receiving the drug should be observed closely for signs of thyrotoxicosis. If indications of overdosage appear, discontinue medication for 2-6 days, then resume at a lower dosage level. In patients with diabetes mellitus, careful observations should be made for changes in insulin or other antidiabetic drug dosage requirements. If hypothyroidism is accompanied by adrenal insufficiency, as Addison's Disease (chronic subcortical insufficiency), Simmond's Disease (panhypopituitarism) or Cushing's syndrome (hyperadrenalism), these dysfunctions must be corrected prior to and during SYNTHROID (sodium levothyroxine) administration. The drug should be administered with caution to patients with cardiovascular disease; development of chest pains or other aggravations of cardiovascular disease requires a reduction in dosage.
Contraindications: Thyrotoxicosis, acute myocardial infarction.
Side effects: The effects of SYNTHROID (sodium levothyroxine) therapy are slow in being manifested. Side effects, when they do occur, are secondary to increased rates of body metabolism; sweating, heart palpitations with or without pain, leg cramps, and weight loss. Diarrhea, vomiting, and nervousness have also been observed. Myxedematous patients with heart disease have died from abrupt increases in dosage of thyroid drugs. Careful observation of the patient during the beginning of any thyroid therapy will alert the physician to any untoward effects.

In most cases with side effects, a reduction of dosage followed by a more gradual adjustment upward will result in a more accurate indication of the patient's dosage requirements without the appearance of side effects.
Dosage and Administration: The activity of a 0.1 mg. SYNTHROID (sodium levothyroxine) TABLET is equivalent to approximately one grain thyroid, U.S.P. Administer SYNTHROID tablets as a single daily dose, preferably after breakfast. In hypothyroidism without myxedema, the usual initial adult dose is 0.1 mg. daily, and may be increased by 0.1 mg. every 30 days until proper metabolic balance is attained. Clinical evaluation should be made monthly and PBI measurements about every 90 days. Final maintenance dosage will usually range from 0.2-0.4 mg. daily. In adult myxedema, starting dose should be 0.025 mg. daily. The dose may be increased to 0.05 mg. after two weeks and to 0.1 mg. at the end of a second two weeks. The daily dose may be further increased at two-month intervals by 0.1 mg. until the optimum maintenance dose is reached (0.1-1.0 mg. daily).
Supplied: Tablets: 0.025 mg., 0.05 mg., 0.1 mg., 0.15 mg., 0.2 mg., 0.3 mg., 0.5 mg., scored and color-coded, in bottles of 100 and 500. Injection: 500 mcg. lyophilized active ingredient and 10 mg. of Mannitol, N.F., in 10 ml. single-dose vial, with 5 ml. vial of Sodium Chloride Injection, U.S.P., as a diluent. SYNTHROID (sodium levothyroxine) INJECTION may be administered intravenously utilizing 200-400 mcg. of a solution containing 100 mcg. per ml. If significant improvement is not shown the following day, a repeat injection of 100-200 mcg. may be given.

FLINT LABORATORIES
DIVISION OF TRAVENOL LABORATORIES INC
Morton Grove, Illinois 60053

As your hypothyroid patients travel along the smooth road, let us be of service in these 4 specific ways:

1 FREE FILM AND BOOK ON HYPOTHYROIDISM: In a 30-minute, 16-mm. sound/color film, 5 prominent endocrinologists discuss "Thyroid Deficiency—Current Concepts of Diagnosis and Treatment". Film available on FREE loan to physician groups or hospitals.

A new book, soon to be published, is devoted to the clinical aspects of hypothyroidism. The author, a leading endocrinologist, describes the many faces of the condition and emphasizes the importance of clinical assessment of the patient. Write, or ask your Flint man, to be placed on our list to receive a free copy.

THYROID DEFICIENCY
Current concepts of diagnosis and treatment

2 NEW THYROID FUNCTION TEST BOOK: Newly published *Guideposts to Thyroid Therapy* discusses the tests most appropriate for use with each type of thyroid medication. Fully describes thyroid function tests and places their relative values in perspective for physicians. It will give you valuable new insights into the role of these tests in diagnosis and treatment. FREE—ask your Flint man.

Guideposts to Thyroid Therapy

3 TO START THERAPY, FREE TAB-MINDER dispensing units, color-coded to match colors of SYNTHROID tablets in starting dosage strengths. TAB-MINDER helps patients to regularly take the thyroid dosage you prescribe, avoid medication errors. Ask your Flint man.

FREE
MEDICATION DISPENSERS
TO START ALL YOUR PATIENTS ON SYNTHROID, IN THESE STRENGTHS:
0.05 mg. (white); 0.1 mg. (yellow);
0.15 mg. (violet); 0.2 mg. (pink).

4 SYNTHROID® INJECTION FOR THYROID EMERGENCIES: Whenever (as in myxedema coma) rapid replacement of thyroid hormone is needed to sustain life, prompt clinical response is essential. SYNTHROID INJECTION makes this therapy instantly available. Useful also in postoperative thyroid medication situations until oral therapy can be reinstated. Ask your Flint man for further information.

FLINT
Synthroid Injection

FLINT LABORATORIES
DIVISION OF TRAVENOL LABORATORIES, INC.
Morton Grove, Illinois 60053

when an unnerving experience compounds the pain

the compound analgesic that calms instead of caffeinates

In addition to pain, this patient has experienced anxiety, fear, embarrassment, and frustration. No doubt these psychic factors actually increased her perception of pain. Surely the last thing she needs is an analgesic containing caffeine. The logical choice is Phenaphen with Codeine. It provides a quarter grain of phenobarbital to take the nervous "edge" off, so the rest of the formula can control the pain more effectively. It's no accident that the Phenaphen formulations contain a sedative rather than a stimulant. Don't you agree, Doctor, that psychic overlay is an important factor in most of the accident cases you see?

Phenaphen® with Codeine

Phenaphen with Codeine Nos. 2, 3, or 4 contains: Phenobarbital (¼ gr.), 16.2 mg. (warning: may be habit forming); Aspirin (2½ gr.), 162.0 mg.; Phenacetin (3 gr.), 194.0 mg.; Hyoscyamine sulfate, 0.031 mg.; Codeine phosphate, ¼ gr. (No. 2), ½ gr. (No. 3), or 1 gr. (No. 4) (warning: may be habit forming). **Indications:** Provides relief in severer grades of pain, on low codeine dosage, with minimal possibility of side effects. Its use frequently makes unnecessary the use of addicting narcotics. **Contraindications:** Hypersensitivity to any of the components. **Precautions:** As with all phenacetin-containing products, excessive or prolonged use should be avoided. **Side effects:** Side effects are uncommon, although nausea, constipation and drowsiness may occur. **Dosage:** Phenaphen No. 2 and No. 3—1 or 2 capsules every 3 to 4 hours as needed; Phenaphen No. 4—1 capsule every 3 to 4 hours as needed. For further details see product literature.

A. H. Robins Company, Richmond, Va.

A·H·ROBINS

'head clear upon arising'

For upper respiratory allergies and infections including the common cold, Dimetapp Extentabs® effectively relieve the stuffiness, drip and congestion all night and all day long on just one Extentab every 12 hours. For most patients drowsiness or overstimulation is unlikely.

prescribing information appears on next page

A·H·ROBINS

A. H. Robins Company
Richmond, Va. 23220

Dimetapp
Extentabs®

Dimetane® (brompheniramine maleate), 12 mg.; phenylephrine HCl, 15 mg.; phenylpropanolamine HCl, 15 mg

Delta physicians initiate CHP study for rural area

Formal agreement has been reached between the University of Michigan Bureau of Hospital Administration and the Zone 2 Planning Council of the Upper Peninsula Area-wide CHP Association to conduct a study for delivering comprehensive health care in a rural area.

No contract had been signed as the copy was prepared for this journal, but Michigan Blue Cross had also expressed an interest in helping support the study of new health care delivery systems in the Delta County area.

"Everything is in the planning stage," explains Raymond L. Hockstad, MD, Escanaba, member of the Delta County Health Planning Council. The Council proposed the study to the Kellogg Foundation, which agreed to consider supporting the project if the bureau develops a pilot program which can be used in other rural areas.

The study proposal grew out of the recognition by Delta County physicians a year and a half ago that the local hospital needed modernization. At first they sought a new hospital.

After forming a local facilities committee, headed by William LeMire, III, MD, under the Delta County Comprehensive Health Planning Council, the community representatives on the committee decided that what was really needed was an over-all plan for the delivery of health care for the area.

"The Delta physicians have had to take the lead, to bring to the community's attention the need for new facilities and the need for planning the delivery of health care to the whole community," explains Doctor Hockstad.

The physicians have interested local industry, banks, governmental agencies, clergy, and other health professionals in the study. Also the Delta County Medical Society has voted $500 to support the study.

The eventual plan decided upon must be flexible, points out Doctor Hockstad. "That's an absolute necessity in a rural setting."

Physicians must be able to elect to be full-time, part-time or no-time employees of a possible health maintenance organization; a patient, like-

(Continued on Page 489)

Dimetapp Extentabs®

INDICATIONS: Dimetapp Extentabs are indicated for symptomatic relief of allergic manifestations of upper respiratory illnesses, such as the common cold, seasonal allergies, sinusitis, rhinitis, conjunctivitis and otitis. In these cases it quickly reduces inflammatory edema, nasal congestion and excessive upper respiratory secretions, thereby affording relief from nasal stuffiness and postnasal drip.
CONTRAINDICATIONS: Hypersensitivity to antihistamines of the same chemical class. Dimetapp Extentabs are contraindicated during pregnancy and in children under 12 years of age. Because of its drying and thickening effect on the lower respiratory secretions, Dimetapp is not recommended in the treatment of bronchial asthma. Also, Dimetapp Extentabs are contraindicated in concurrent MAO inhibitor therapy.
WARNINGS: *Use in children:* In infants and children particularly, antihistamines in overdosage may produce convulsions and death.
PRECAUTIONS: Administer with care to patients with cardiac or peripheral vascular diseases or hypertension. Until the patient's response has been determined, he should be cautioned against engaging in operations requiring alertness such as driving an automobile, operating machinery, etc. Patients receiving antihistamines should be warned against possible additive effects with CNS depressants such as alcohol, hypnotics, sedatives, tranquilizers, etc.
ADVERSE REACTIONS: Adverse reactions to Dimetapp Extentabs may include hypersensitivity reactions such as rash, urticaria, leukopenia, agranulocytosis and thrombocytopenia; drowsiness, lassitude, giddiness, dryness of the mucous membranes, tightness of the chest, thickening of bronchial secretions, urinary frequency and dysuria, palpitation, hypotension/hypertension, headache, faintness, dizziness, tinnitus, incoordination, visual disturbances, mydriasis, CNS-depressant and (less often) stimulant effect, anorexia, nausea, vomiting, diarrhea, constipation, and epigastric distress.
HOW SUPPLIED: Light blue Extentabs in bottles of 100 and 500.

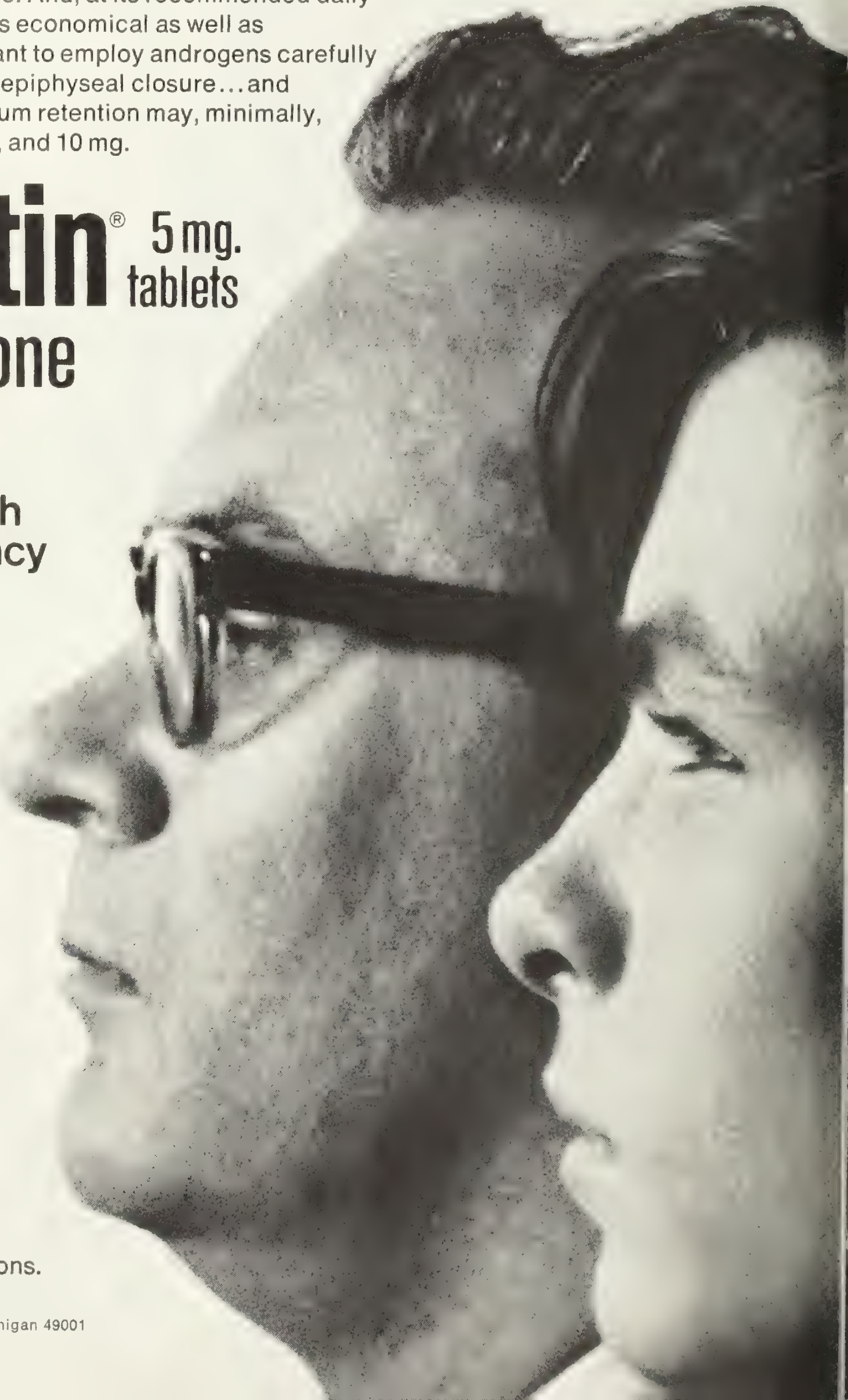
when manhood ebbs... or is delayed due to testicular hormonal insufficiency

What nature denies, Halotestin may replace. That's the purpose of this orally active androgen in conditions such as impotency, eunuchoidism, and eunuchism. The most widely used agent of its kind, Halotestin is replacement therapy with approximately five times the potency of oral methyltestosterone. And, at its recommended daily dosage of 2 to 10 mg., Halotestin is economical as well as convenient. Of course, you will want to employ androgens carefully in young boys to avoid premature epiphyseal closure... and in the elderly where possible sodium retention may, minimally, precipitate edema. Tablets of 2, 5, and 10 mg.

Halotestin® 5 mg. tablets

[fluoxymesterone Upjohn]

oral replacement with parenteral-like potency



Please see facing column for summary of contraindications, precautions, and adverse reactions.

Upjohn The Upjohn Company, Kalamazoo, Michigan 49001

Halotestin®
(fluoxymesterone, Upjohn)

Orally active androgen about 5 times as potent in anabolic and androgenic activity as methyltestosterone. Halotestin (fluoxymesterone) induces significant retention of calcium and potassium, but retention of sodium not marked. Doses below 20 mg. daily have little effect in producing creatinuria.
Indications *Male:* Replacement therapy in testicular hormone deficiency states. Prevents atrophy of the accessory male sex organs following castration for as long as therapy is continued. Impotence and male climacteric symptoms when due to androgen deficiency. Primary eunuchoidism and eunuchism. Delayed puberty when established as not a simple familial trait. Indicated for those symptoms of panhypopituitarism related to hypogonadism, however, appropriate adrenal cortical and thyroid hormone replacement therapy remain of primary importance. *Female:* Palliation of androgen-responsive, advanced, inoperable breast cancer in women between 1 and 5 years postmenopausal or women in whom castration has shown the tumor to be hormone dependent. Prevention of postpartum breast manifestations of pain and engorgement; there is no satisfactory evidence that this drug prevents or suppresses lactation per se. In osteoporosis androgens may be of adjunctive value to adequate considerations of diet, calcium balance, physiotherapy and general health promoting measures. *Males and Females:* In the treatment of protein depletion states which occur in geriatric patients, in debilitation states, in chronic corticoid therapy, resistant fractures; cryptorchidism; creating a positive nitrogen balance, tissue repair and other anabolic effects. Androgenic steroids may produce a response in aplastic anemias, myelofibrosis, myelosclerosis, agnogenic myeloid metaplasia and hypoplastic anemias due to malignancy or myelotoxic drugs. Androgens are not of value in other anemias.
Contraindications Pregnancy (may virilize female fetus), mammary carcinoma in the male, prostatic carcinoma, severe liver disease, severe cardiorenal disease and severe persistent hypercalcemia.
Precautions Employ with caution in young boys to avoid precocious sexual development and premature epiphyseal closure. Androgens tend to promote retention of sodium and water, therefore, watch for edema—particularly in the elderly. Incidence and severity of edema have been minimal and have been associated only with high doses used for palliation of breast cancer. Hypercalcemia may occur, particularly in patients with metastatic breast carcinoma; if this occurs the drug should be discontinued. Changes in liver function tests, such as increased BSP retention and SGOT levels, can occur during therapy. Jaundice has been rarely reported. If liver function tests are altered, discontinue medication or reduce dose. Priapism is indicative of excessive dosage and is indication for temporary withdrawal of drug. When treating protein depletion states or osteoporosis, an adequate diet should be provided and prolonged immobilization avoided whenever possible. When treating aplastic or hypoplastic anemias, androgen therapy should not replace other measure such as transfusion, correction of iron deficiency, antibacterial therapy, and the use of corticosteroids.
Adverse reactions Nausea, dyspepsia, menstrual irregularities, hepatic dysfunction, priapism, edema, precocious sexual development, and premature epiphyseal closure in young patients have been reported. *Male*—Prolonged administration or excessive dose may cause inhibition of testicular function with oligospermia and decreased ejaculation volume. *Female*—Large doses or prolonged administration may produce masculinization with signs such as hirsutism, deepening of the voice, enlargement of the clitoris, acne, and sometimes, increased libido.
Supplied *Tablets: 2 mg.*, scored—bottles of 100./*5 mg.*, scored—bottles of 50./*10 mg.*, scored—bottles of 50.
For additional product information, see your Upjohn representative or consult the package circular.

Upjohn The Upjohn Company, Kalamazoo, Michigan
JA68-7627-R MED B-5-S (LQX)

wise, must be allowed to sign or not, a pre-paid contract; the facility developed will have to take care of the people who have signed pre-paid contracts and also those on a fee-for-service paying basis, and those patients who elect not to arrange for pre-paid care must be free to go to doctors who are not a part of the health maintenance organizations.

The Delta County Health Planning Council agreed on March 29 to have the U-M Bureau do the study, but the Zone 2 Comprehensive Health Planning Agency covering Dickinson, Menominee, Delta and Schoolcraft counties actually must sign the document.

"We think we have a good thing going," says Doctor Hockstad. "Such a thing has never been done for the rural area and we're hoping it will prove valuable and fruitful."

Better communications between officers, members sought by Wayne Council

The Wayne County Medical Society Council is working through its Medical Facilities Committee to explore means of providing better communications between members and society officers. The committee is soliciting physicians for suggestions for changes which might make the work of the society known to the members more effectively and expeditiously. Names of committee members and their hospital affilliations are published in the *Detroit Medical News* to make it easier for county, state and AMA members to contact them with suggestions.

The Wayne County Council has taken a variety of other actions in recent months.

At its Feb. 19 meeting, the WCMS Council approved the WCMS Public Health Committee recommendation that the society co-sponsor the rubella immunization program of the Detroit Department of Health. The society thus will encourage its members to immunize the children in their practices between the ages of one and 12, and will provide volunteer physicians to staff immunization centers on a Sunday this month designated for the project.

The Council has approved in principle the Southeastern Michigan Regional Cancer Program, a three-year project to be funded by the Regional Medical Program. The cancer program will be a multi-discipline plan to improve the care of cancer patients through the education of physicians and allied workers. It is planned to train a corps of practicing and interested physicians to serve as advisor therapists for other doctors on request in the care of their patients.

Two unique programs aiding physicians in SW Michigan

Two innovations in health care are underway in southwestern Michigan, aiding the physicians there to improve the delivery of their services to their patients.

One new program is a cardiovascular teaching project conducted in the hospitals of the region and supported by Regional Medical Program funds. Additional RMP monies are being sought to expand the project to form a group of consultants from several specialties who will develop educational programs to be presented weekly to the hospitals desiring the programs.

Letters are being drafted asking Southwestern Michigan physicians to participate. Other new phases of the project may include exchange of nurses between hospitals, seminars for medical and administrative personnel and a possible co-operative mobile intensive care unit for transfer of critical patients.

The cardiovascular teaching program, the initial phase of the program, is based at Mercy Hospital, Benton Harbor.

The second innovative program underway in the Southwestern Michigan area is a computer electrocardiogram interpretation system supervised by a panel of internists. The system consists of a telephone tie-in by each participating hospital with Interstate Computers for Medicine at Kalamazoo.

Within minutes, an interpretation by teletype is returned to the sending hospital, and simultaneously to an interface at Benton Harbor's Mercy Hospital. At present, Memorial Hospital at St. Joseph, Watervliet Community Hospital, South Haven Community Hospital and Dowagiac Lee Memorial Hospital have agreed to enter the system.

Members of the EKG reviewing panel, who check the EKGs twice a day, and send corrections back to the computer are John Carter, MD, chairman; Rodolfo Bacolor, MD; John Bailey, MD; Gerald Beal, MD; Jack Bronfenbrenner, MD; Frank Bunker, MD, and J. Griswold Ruth, MD. Clinton Wilson, MD, Benton Harbor generalist, was instrumental in getting the service started.

MICHIGAN
DEPARTMENT
OF PUBLIC
HEALTH

Monthly Surveillance Report

Cases of Certain Diseases Reported
To the Michigan Department of Public Health

For the Five-Week Period Ending April 2, 1971

	1971 This 5-Week Period	1970 Same 5-Week Period	1971 Total To Above Date	1970 Total Same Date	Total Cases for 1970
Rubella	470	557	902	1,173	3,012
Congenital Rubella Syndrome	1	0	1	0	2
Measles	246	167	375	291	1,834
Whooping Cough	11	8	26	32	195
Diphtheria	—	—	—	—	—
Mumps	2,457	887	4,856	2,026	7,825
Scarlet Fever & Strep Sore Throat	1,965	1,698	4,654	4,411	11,863
Tetanus	0	1	0	2	8
Poliomyelitis (paralytic)	0	0	0	0	2*
Hepatitis	552	458	1,363	1,206	4,594
Salmonellosis (other than S. typhi)	51	38	153	129	665
Typhoid Fever (S. typhi)	0	1	1	2	14
Shigellosis	18	22	57	50	225
Aseptic Meningitis	9	6	29	17	296
Encephalitis	8	3	32	15	155
Meningococcic Meningitis	14	5	25	20	69
H. Influenza Meningitis	6	9	20	21	61
Tuberculosis	222	171	507	514	2,006
Syphilis	357	354	990	888	3,900
Gonorrhea	1,759	1,813	4,750	5,056	20,676

Information can be supplied by the local health department on the local incidence of disease.

* 1970 Correction

Maurice Reizen, M.D., Director
Michigan Department of Public Health

In memoriam

Willard G. Beattie, MD
St. Petersburg, Fla.

Willard G. Beattie, MD, former Oakland County physician who had been residing in St. Petersburg, died Jan. 16 at the age of 72.

Doctor Beattie, a graduate of the University of Michigan Medical School, was affiliated with Northwestern Branch of Grace Hospital, and Highland Park General Hospital. He was a pediatrician.

Burdette M. Berens, MD
Kalkaska

Burdette Marlin Berens, MD, member of the staffs of Kalkaska Memorial Health Center and Munson Health Center in Traverse City, died March 22 at the age of 49.

Doctor Berens had practiced 10 years in Lansing before moving to Kalkaska in 1962. He was a general practitioner and was graduated from the University of Iowa. Doctor Berens was a member of the American Academy of General Practice.

Schuyler O. Cotton, MD
Detroit

Schuyler Opp Cotton, MD, Detroit physician for 40 years, died March 21 at the age of 80.

Doctor Cotton, a retired generalist, was a graduate of the University of Illinois School of Medicine. He had been affiliated with Grace Hospital in Detroit. Doctor Cotton's mother, father and brother all were physicians.

Charles L. Crook, MD
Highland Park

Charles L. Crook, MD, Highland Park generalist for 25 years, died March 24 at the age of 54.

Doctor Crook died while on vacation in St. Petersburg, Fla., following a long illness. He had served as city physician and then city health officer for Highland Park and was awarded the Highland Park Junior Chamber of Commerce distinguished Service Award in 1951.

A graduate of the University of Michigan Medical School, Doctor Crook was on the staff of Ardmore Hospital. He was a member of the Flying Physicians and was co-author of a book, *Famous Firsts in Medicine*. He was a major with the Great Lakes Regional Civil Air Patrol.

(Continued on Page 494)

Ef-
fic-
iency

Dicarbosil®
ANTACID

Your ulcer patients and others will confirm it. Specify DICARBOSIL 144's—144 tablets in 12 rolls.

ARCH LABORATORIES
319 South Fourth Street, St. Louis, Missouri 63102

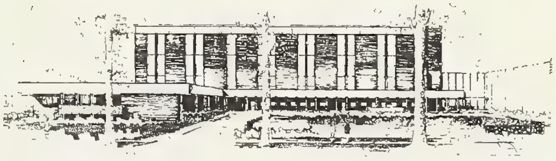
SOME PHYSICIANS KNOW what to do with their patients who are alcoholics or problem drinkers.

SOME PHYSICIANS WISH they knew what to do with them.

Have you thought of the Alcoholism Services of the Battle Creek Sanitarium Hospital? Since 1965 we have maintained an enviable record in the rehabilitation of the alcoholic or problem drinker.

A full range of services and specialties.

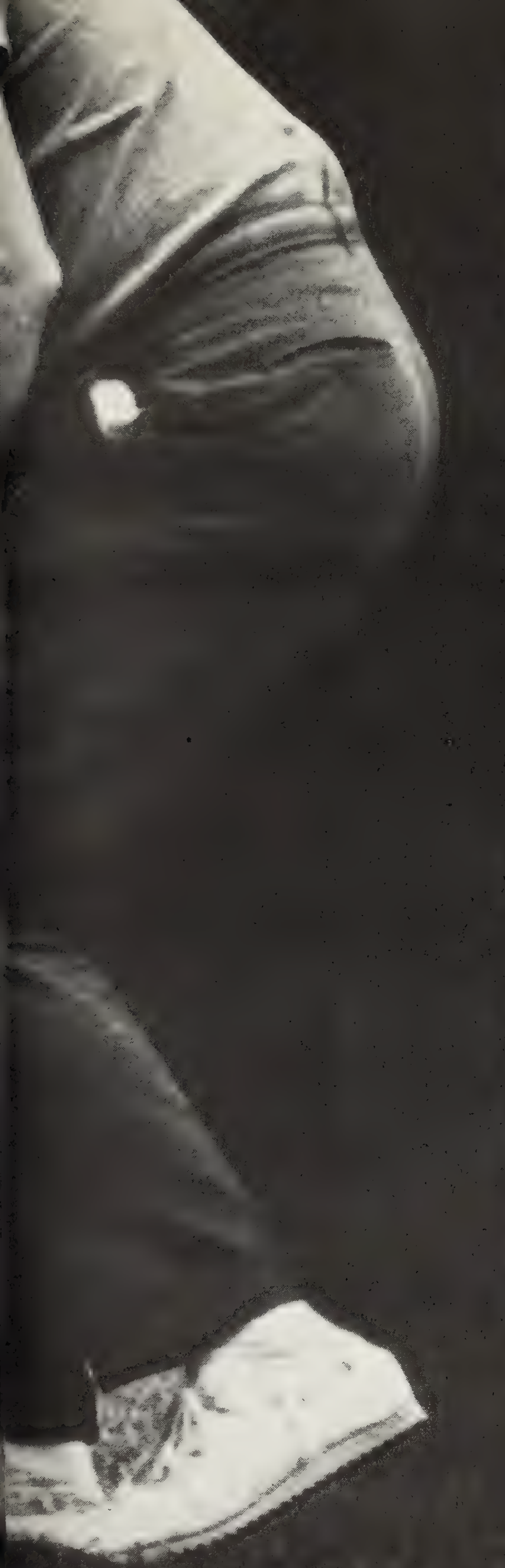
Give us a call
616-964-7121 Ext. 588 or 589



Battle Creek Sanitarium and Hospital
197 N. Washington Avenue
Battle Creek, Michigan 49016

This photograph in no way implies an endorsement of Norgesic by Joe Namath

WHEN TRAUMA
RESULTS IN PAIN.



NORGESIC®

(orphenadrine citrate, 25 mg.; aspirin, 225 mg.;
phenacetin, 160 mg.; caffeine, 30 mg.)

the versatile analgesic

offers fast onset of symptomatic relief

produces a high level of analgesia

affords sustained pain relieving action

provides predictable relief—
overall satisfactory response in
approximately 80% of patients

Contraindications: Because of the mild anticholinergic effect of orphenadrine, Norgesic should not be used in patients with glaucoma, pyloric or duodenal obstruction, achalasia, prostatic hypertrophy or obstructions at the bladder neck. Norgesic is also contraindicated in patients with myasthenia gravis and in patients known to be sensitive to aspirin, phenacetin or caffeine.

Since mental confusion, anxiety and tremors have been reported in patients receiving orphenadrine and propoxyphene concurrently, it is recommended that Norgesic not be given in combination with propoxyphene (Darvon®).

Warnings: USE IN PREGNANCY: Since safety of the use of this preparation in pregnancy, during lactation, or in the child-bearing age has not been established, use of the drug in such patients requires that the potential benefits of the drug be weighed against its possible hazard to the mother and child.

USE IN CHILDREN: The safe and effective use of this drug in children has not been established; therefore, the physician must weigh the benefits against the potential hazards.

Precautions: It has been reported that prolonged or excessive use of phenacetin may result in nephrotoxicity. Caution, therefore, should be exercised when Norgesic is administered to patients with renal disorders. It should also be used with caution in patients with tachycardia.

Adverse Reactions: Side effects of Norgesic are those seen with APC or those usually associated with mild anticholinergic agents. These may include tachycardia, palpitation, urinary hesitancy or retention, dry mouth, blurred vision, dilatation of the pupil, increased intraocular tension, weakness, nausea, vomiting, headache, dizziness, constipation, drowsiness, and rarely, urticaria and other dermatoses. Infrequently an elderly patient may experience some degree of confusion. Mild central excitation and occasional hallucinations may be observed. These mild side effects can usually be eliminated by reduction in dosage. One case of aplastic anemia associated with the use of Norgesic has been reported. No causal relationship has been established.

Dosage and Administration: Adults—1 to 2 tablets 3 to 4 times daily.

Riker Laboratories, Inc.
NORTHRIDGE, CALIFORNIA 91324
A SUBSIDIARY OF 3M COMPANY

Norgesic...the versatile analgesic
provides effective analgesia and relief
of associated muscle spasm

W. M. Dodge, Jr., MD
Battle Creek

Warren Maynard Dodge, Jr., MD, retired Battle Creek ophthalmologist, died Feb. 25 at the age of 70.

Doctor Dodge, a third generation physician, was a graduate of the University of Minnesota School of Medicine and was a fellow of the American College of Surgeons. He served five years on the staff of the Battle Creek Sanitarium after going to Battle Creek in 1931 and then maintained a private practice until his retirement in 1965.

Doctor Dodge was affiliated with Community and Post hospitals in Battle Creek.

C. E. Lemen, MD
Traverse City

Charles Edward Lemen, MD, medical director of the Grand Traverse Medical Care Facility, died March 13 at the age of 67.

Doctor Lemen, a generalist, was affiliated with Munson Hospital in Traverse City and was a past president of the Grand Traverse-Leelanau-Benzie Counties Medical Society.

Doctor Lemen was a graduate of the University of Michigan Medical School.

Rupert C. L. Markoe, MD
Detroit

Detroit inner city physician for 47 years, Rupert C. L. Markoe, MD, died March 17 at the age of 72.

Doctor Markoe was a native of Puerto Rico and was graduated from the University of Michigan Medical School. He was a generalist with special attention to chest pathology and was on the staff of Herman Kiefer Hospital for more than 30 years. He was a founder and former medical director of Fairview Nursing Home, Detroit.

A board member of the International Afro-American Museum and the NAACP in Detroit, Doctor Markoe was affiliated also with the National Medical Association, the Detroit Medical Society, the American Academy of Tuberculosis Physicians, the National Trudeau Society, the Wayne County TB and Health Society and the Michigan TB and Respiratory Diseases Association. He was a past president of the American College of Chest Physicians.

Mark Marshall, MD
Ann Arbor

Mark Marshall, MD, a distinguished Ann Arbor internist for nearly 60 years, died March 12 at the age of 91. Doctor Marshall, a recipient of a MSMS Certificate of Commendation in 1966, retired in 1965.

Doctor Marshall was the only surviving member of the original staff of St. Joseph Mercy Hospital in Ann Arbor, and was a former chief of staff at the hospital. A graduate of the University of Michigan Medical School, Doctor Marshall had taught as an assistant professor at the university for 12 years at the start of his medical career, before taking up private practice.

The Mark Marshall Lectureship Fund at St. Joseph Mercy Hospital is named in his honor. Doctor Marshall also is a past president of the Washtenaw County Medical Society.

Doctor Marshall was a pioneer in establishing a pattern of medical consulting and in bringing a balance of specialties to private hospital staffs. Doctor Marshall was a fellow of the American College of Physicians, a charter member of the American Board of Internal Medicine and belonged to the American Heart Association.

A. Raymond Moon, MD
Saginaw

A. Raymond Moon, MD, Saginaw physician for more than 40 years, died March 4 at the age of 86. Doctor Moon had retired in 1965 and resided in Cadillac.

Doctor Moon, a graduate of the Detroit College of Medicine, practiced medicine in Detroit from 1912 to 1924 until taking up practice in Saginaw. He was affiliated with Saginaw General Hospital and St. Mary's hospitals in Saginaw and was a member of the Advisory Council of Alma College.

Gilbert D. Schoenfield, MD
Miami Beach

Former Detroit physician Gilbert David Schoenfield, MD, died Feb. 28 at the age of 67.

Director of the Marygrove Medical Clinics in Detroit, Doctor Schoenfield was a graduate of the Wayne State University School of Medicine. He also was affiliated with Grace and Hutzel hospitals in Detroit.

Doctor Schoenfield was a generalist.

Claude L. Weston, MD
Owosso

A past president of the Shiawassee County Medical Society, Claude LaVerne Weston, MD, died March 17 at the age of 74.

Doctor Weston, a graduate of St. Louis University School of Medicine, was an internist. He was a former chief of staff at Owosso Memorial Hospital. Doctor Weston had served as a delegate to the MSMS House of Delegates from 1944 to 1958, and also was a member of the Radiological Society of North America.

William Westrate, Sr., MD
Holland

William Westrate, Sr., MD, Holland physician for 50 years, died March 16 at the age of 81. He was the recipient in 1968 of an MSMS 50-year award and was a past chief of staff at Holland Hospital.

A graduate of the University of Michigan Medical School, Doctor Westrate was a generalist. He was a past president of the Ottawa County Medical Society. Doctor Westrate has two sons who are also physicians and shared his office.

Russell F. Weyher, MD
Detroit

Retired Detroit internist Russell Frank Weyher, MD, died March 20 at the age of 73.

Doctor Weyher was a graduate of the Detroit College of Medicine and served on the staff of Providence Hospital. He was a member of the American College of Chest Physicians. He had served as a member of the Wayne County Medical Society Nursing Committee and was a world traveler.

Medicolegal

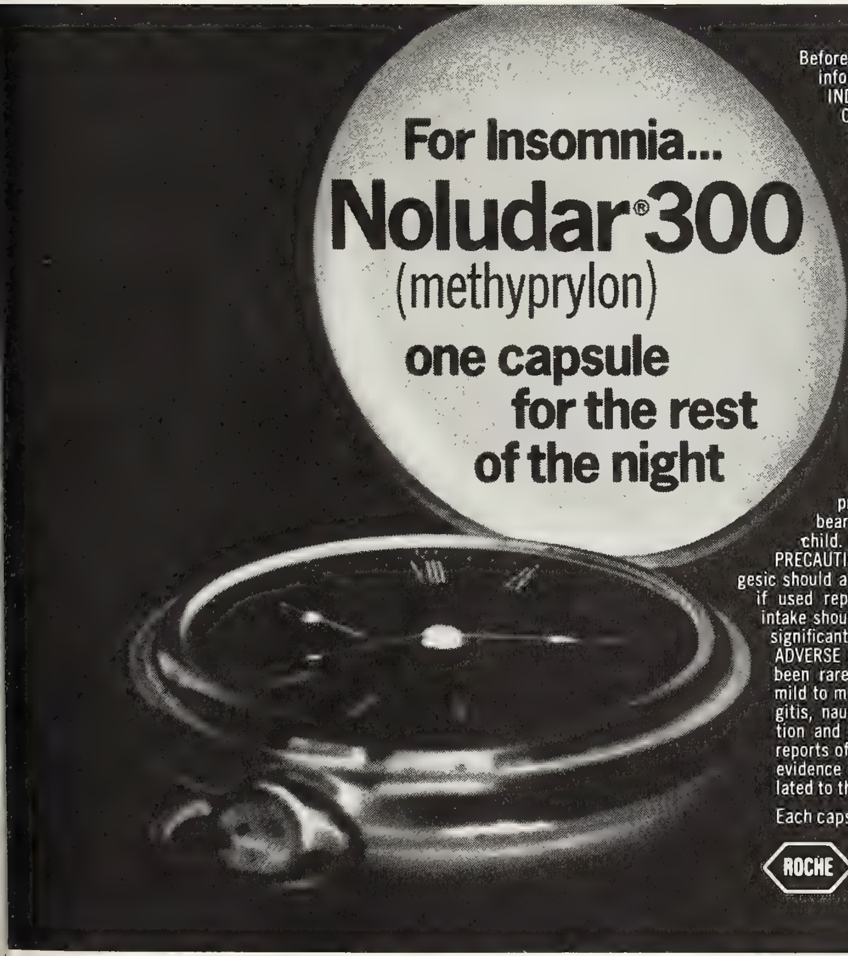
The AMA's *Citation* Newsletter, prepared by the AMA Law Department, lists the following cases involving health personnel in Michigan. Persons interested in obtaining more information on individual cases may write MSMS Headquarters.

Optometrist Statute Upheld
Michigan Court of Appeals, May 1, 1970
from the Jan. 1, 1971 *Citation*

Standard of Care for Specialists
Michigan Superior Court, Nov. 12, 1970
from the Feb. 15, *Citation*

Failure to Diagnose Head Injury
Michigan Court of Appeals, April 24, 1970
Leave to Appeal denied, June 28, 1970
from the March 1, 1971, *Citation*

Recovery for Emotional Disturbances
Permitted in No-Impact Case
Michigan Superior Court, Sept. 22, 1970
from the March 1, 1971, *Citation*



Before prescribing, please consult complete product information, a summary of which follows:
INDICATION: Relief of insomnia of varied etiology.
CONTRAINDICATIONS: Patients with known hypersensitivity to the drug.
WARNINGS: Caution patients about combined effects with alcohol and other CNS depressants. Caution against hazardous occupations requiring complete mental alertness, such as operating machinery or driving a motor vehicle shortly after ingesting the drug.
Physical and Psychological Dependence: Physical and psychological dependence rarely reported. If withdrawal symptoms do occur they may resemble those associated with withdrawal of barbiturates and should be treated in the same fashion. Use caution in administering to individuals known to be addiction-prone or those whose history suggests they may increase the dosage on their own initiative. Repeat prescriptions should be under adequate medical supervision.
Usage in Pregnancy: Weigh potential benefits in pregnancy, during lactation, or in women of childbearing age against possible hazards to mother and child.
PRECAUTIONS: If sleeplessness is pain-related, an analgesic should also be prescribed. Perform periodic blood counts if used repeatedly or over prolonged periods. Total daily intake should not exceed 400 mg, as greater amounts do not significantly increase hypnotic benefits.
ADVERSE REACTIONS: At recommended dosages, there have been rare occurrences of morning drowsiness, dizziness, mild to moderate gastric upset (including diarrhea, esophagitis, nausea and vomiting), headache, paradoxical excitation and skin rash. There have been a very few isolated reports of neutropenia and thrombocytopenia; however, the evidence does not establish that these reactions are related to the drug.

Each capsule contains 300 mg of methyprylon.

ROCHE
ROCHE LABORATORIES
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

Classified Advertising

$5.00 per insertion of 50 words or less, with an additional 10 cents per word in excess of 50.

GENERAL PRACTITIONERS: Are you interested in bringing up your family in a small community with excellent school systems, churches and city pride? We are centrally located just off US-131 between Grand Rapids and Kalamazoo and in definite need for at least one new doctor. Write: Otsego Chamber of Commerce, Otsego, Michigan 49078.

Well trained, family physician of retirement age doing largely internal medicine and grossing over $100,000 per year, desires competent younger man as replacement associate. Excellent hospital and office facilities, in rural area. Inquire: Box 3, Michigan State Medical Society, 120 West Saginaw St., East Lansing, Michigan 48823.

NEW EXPANDING OPPORTUNITIES for family physicians and physicians specializing in pediatrics, internal medicine, anesthesiology, in medically awakening community. Contemporary, automated, 110 bed new hospital opening March 1, 1971. Patient service area 50,000 people. Medical staff leading and supporting recruitment efforts. Excellent community location, 40 miles equidistant to Milwaukee and Madison, Wisconsin. Complete educational, cultural and recreational facilities. New medical dental building and 130 bed skilled hospital care nursing home being constructed adjacent to the new hospital ready for occupancy in the Spring of 1971. Immediate satisfaction in practice, income and family living. Special assistance if needed. Write or call Dr. Paul R. Glunz, Watertown Memorial Hospital, Watertown Area Health Care Center, Watertown, Wisconsin 53094. Tel: (414) 261-4210 for more information.

PSYCHIATRIC RESIDENCY: 1100 bed university affiliated Medical Center. Fully approved three year training program in individual and group therapy, Child psychiatry, psychiatric consultation, medico-legal experience, basic and clinical neurology, dynamic clinical experience and all other essential services. Emphasis on general hospital and out-patient practices. Stipends from $14,000 to $16,000 ($1,000 less for candidates without internship). For further details and consideration submit your resume to: Dr. Robert Schoback, Director of Psychiatric Training, Henry Ford Hospital, Detroit, Michigan 48202.

Professional (MD) corporation or general practice available, Southeastern Michigan. Accidental death leaves large, established practice and pleasant, growing community without an MD. Near lakes, recreation, hunting, expressway, large cities. Sell or lease new brick building, 5 examining rooms, lab, X-ray, EKG, air conditioning, private parking, trained staff. Vaughan, Linden, Michigan 48451. (313) 735-7809 (Night 735-4081).

GENERAL SURGEON—for practice in Eagle River, Wis., famed northern Wisconsin year around vacation community. Offering new 40 bed hospital, completely equipped for general, orthopedic surgery, X-ray, lab and physical therapy depts. Staff: 5 Gen. Prac., Ob-Gyn Dr., radiologist. Hospital attractively located adjacent to golf course and near chain of 28 lakes. Ideal family living without pressures. Unlimited recreational opportunities in fishing, boating, snowmobiling, skiing, hunting. Over 1300 lakes in county, trout streams. Exc. schools, college nearby. Nearby metropolitan centers accessible by airlines. Pop. immediate area 8,000, year around, 25,000 summers. Contact Bob Satran, Eagle River, Wisconsin. Phone (715) 479-4422.

PHYSICIAN for part time work—in a permanent position—in a large industrial medicine practice. For particulars write: Box #4, 120 West Saginaw Street, East Lansing, Michigan 48823.

SUMMER FUN for girls, ages 8 to 17 years. Features horsemanship, both Western and English. Heated swimming pool; instructions in synchronized swimming and diving. Farm animal program, nature program, tennis, archery, and pioneering. Located 16 miles west of Clare, Michigan. For information, write: Mrs. Ted McCullough, Canadea Dude Ranch, Lake, Michigan 48632.

ANESTHESIOLOGIST—to join one full time anesthesiologist. Mid-Michigan community of 20,000. University of 14,000. Rural and resort area. Lakes and ski hills within 15 minutes. Two main expressways with easy access. Near several large metropolitan areas. Hospital, 125 beds, with 80 bed extended care facility. JCAH approved. Hospital has two full time pathologists, a full time radiologist. Medical staff of 30 men with 65% specialists. Open financial arrangements. Contact: R. E. Pieratt, Administrator (517) 773-7941.

EMERGENCY ROOM PHYSICIAN: 16 man group in Green Bay, Wisconsin establishing Emergency Room Department. Positions available. Salary open with available stockholder arrangement. Contact C. G. Novotny, M.D., West Side Clinic, Green Bay, Wisconsin 54303.

Advertisers in MICHIGAN MEDICINE are friends of the profession. By accepting their advertising we show confidence in them, their services and products. They help make the journal a quality publication. Please familiarize yourself with their services and products and let them know that you see their advertising in MICHIGAN MEDICINE.

The PROFESSIONAL MANAGEMENT *since 1932* P.M® FOR PHYSICIANS AND DENTISTS **Group**

**Professional Management Offices
In These Cities .....**

ANN ARBOR, BATTLE CREEK, BERKLEY, DETROIT,
FLINT, GRAND RAPIDS, KALAMAZOO, LANSING,
MUSKEGON, SAGINAW AND TRAVERSE CITY.

**Black and Skaggs Associates
PM Systems, Incorporated**

181 North Avenue PM BUILDING Battle Creek, Michigan 49017

HOSPITAL
PLANNING
INC.
Alco Universal Building
East Lansing, Michigan
48823
517 332-1333

**PROFESSIONAL
PERSONNEL RECRUITMENT
FOR
HOSPITALS & CLINICS**
Administrators, Physicians,
Dept. Heads

PHYSICIANS — ALL SPECIALTIES

At no financial obligation, let us present your resume to our Clients. As Planning & Personnel Consultants, we serve fine Hospitals, Clinics, Universities, and Health Planning Agencies in the Great Lakes Region. We advise physician candidates in depth about a variety of the best opportunities available to assist in making the best decisions.

We welcome resumes from physicians completing training as well as those who have been in practice for some time and desire to relocate, join a Clinic, or medical group. Good opportunities are available in all the specialties including general practice. Send your complete resume including desired objectives in confidence to Arthur A. Lepinot.

Index to Advertisers

American Medical Assoc. 433
Arch Laboratories 491
Armour 466, 467
Battle Creek Sanitarium 491
Brighton Hospital 461
Bristol Laboratories 443, 458, 459
Brown Pharmaceuticals 471
Burroughs-Wellcome & Co. 453, 454
Campbell Soup Co. 423
Classified Advertising 496
David Whitney Bldg. 460
Fleet, C. B. Co. 437
Flint Laboratories 481, 482, 483, 484
Geigy Pharmaceuticals 392
Hoechst Pharmaceuticals 479
Hospital Planning, Inc. 497
Lilly, Eli & Co. 396
Mead Johnson Laboratories 438, 439
Medical Protective Co. 461
Mercywood Hospital 477
Michigan State Medical Society .... Cover III
National Drug Co. 431, 432, 469, 470
North Detroit General Hospital 449
Pharmaceutical Mfg. Assoc. 455
Professional Management 497
Riker Laboratories 492, 493
Robins, A. H. Company 450, 451, 485, 486, 487
Roche Laboratories .. Cover II, 391, 445, 495, Cover IV
Searle, G. D. & Co. 424, 425
Stratton, Ben P., Agency 498
Stuart Pharmaceuticals, Div. of
  Atlas Chem-Ind., Inc. 426, 456, 457
Taylor, Edward L., Ltd. Div. of Glenwood Labs. 462
Upjohn Company 452, 488, 489
U. S. V. Pharmaceutical 434, 435
Walker Corp. and Co. 440, 441
Warner-Chilcott Laboratories 428, 429, 474, 475

check these figures...

they could lead to savings

Umbrella Excess Liability Policy — Our Schedule

✓ Physicians Class 1 & 2 . .	$121.00 Annual Premium*
✓ Physicians Class 3, 4 & 5 .	$205.00 Annual Premium*

* The above premiums assume ownership or use of 2 residences, 2 automobiles, professional liability exposure (basically insured for $100,000/$300,000), and professional office premises exposure. These premiums do **not** include basic Malpractice coverage. The Umbrella plan is sponsored by the Michigan State Medical Society while the basic Malpractice policy is **not.**

CALL US COLLECT (517) 484-2578

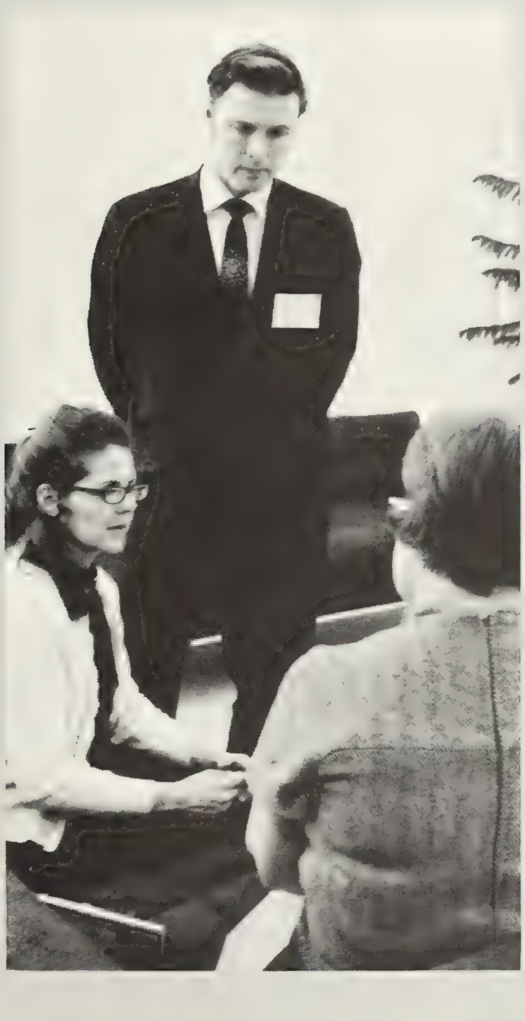
bps **BEN P. STRATTON AGENCY, INC.**
ESTABLISHED IN 1937

107 N. BUTLER BLVD.
LANSING, MICHIGAN 48903
(517) 484-2578

19400 WEST TEN MILE ROAD
SOUTHFIELD, MICHIGAN 48075
357-5083

A recent conference on pregnancy and population problems drew physicians, state health officials, registered nurses and higher education representatives to MSMS headquarters for an all-day meeting. Among their topics were pregnancy counseling and techniques of therapeutic abortion and its complications. The conference was sponsored by the MSMS Committee on Maternal and Perinatal Health. They were greeted by Francis A. Locke, MD, Adrian, standing, chairman of the MSMS Subcommittee on Professional and Lay Education.

During the afternoon portion of the program, Joan C. Stryker, MD, Detroit, medical director, Planned Parenthood, presented a talk on the latest developments in the use of the IUD.

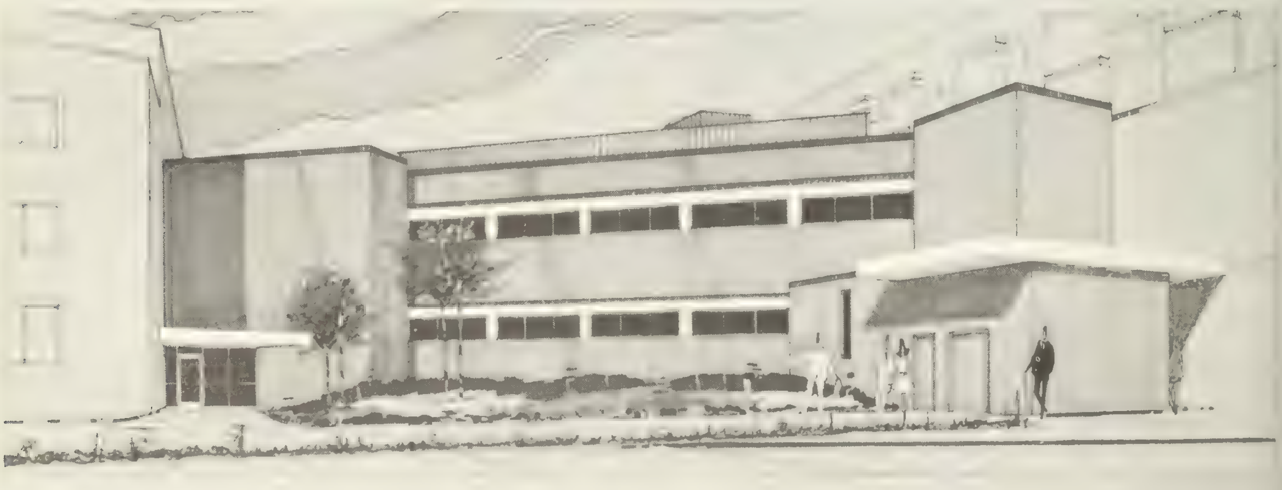


Ted Beals, MD, Ann Arbor, standing, and his wife, Mrs. Peggy Beals, RN, seated left, jointly presented a talk during the morning portion of the workshop. They described their efforts in presenting classes in the Ann Arbor area on the Lamaze technique of natural childbirth.

County medical society leaders from around Michigan were welcomed to MSMS headquarters by Warren F. Tryloff, standing, MSMS director, when they attended a workshop in East Lansing in March.

Following lunch and an introductory session, the county medical society leaders split into one group, while MSMS staff members gathered separately, to discuss areas of concern each group could bring to the other. The meeting ended with the entire group assembling again for an open session, and a tour of the MSMS building for new county executives. Among those present from the county societies, were from left, Norman Anderson, executive director, Genesee; William McClimans, executive secretary, Kent; Donald Fairfield, executive secretary, Muskegon; Jack Kantner, executive secretary, Ingham; Robert Swartley, executive secretary, Jackson, and Carl King, executive secretary, Saginaw.

Construction is underway on the James and Lynelle Holden Perinatal Research Laboratories in the University of Michigan Medical Center. The lab will bring expectant mothers with problem pregnancies into a research center where mother and child can be monitored closely during and after birth. Completion of construction of the building is expected in spring, 1972.



Guests at the MDPAC board meeting were Louis E. May, MD, Howell, left, then in Lansing as a volunteer in the Medic-Corps program, and James Imboden, Columbus, Ohio, AMA-AMPAC public affairs division.

The MDPAC board of directors recently presented a set of carved elephant book-ends to Donato F. Sarapo, MD, Adrian, to express their appreciation for his years as a director and board chairman. Doctor Sarapo was honored as he stepped down from the position at a dinner meeting at MSMS headquarters.

New chairman of the MDPAC board, Louis R. Zako, MD, Allen Park, called the board's attention to the membership report for 1970.

In his final meeting as MDPAC chairman, Doctor Sarapo recounted his experiences of the past years. On his left is Mrs. Sarapo.

At the request of the Kent County Medical Society, a 17-month study was made in Grand Rapids which revealed a need for a single, coordinated program for neighborhood based health services. The Grand Rapids Foundation, with other funding groups, granted the Neighborhood Health Services Program $13,821. This grant helped the Neighborhood Health Services provide two nurses and a health educator at the Franklin-Hall Health Center, and a nurse at the West Side Health Center. The money also supports such activities as immunization programs, Planned Parenthood counseling and mental health services. The Grand Rapids Foundation has also helped the Kent Society, with a grant of $15,000, establish a permanent medical exhibit in the Grand Rapids Public Museum, including a "Wonder of Life" exhibit, which tells the story of conception and prenatal development of a child.

Michigan Medicine

Breaking News: Deadline, April 27
May 1971, Volume 70, Number 10
Michigan State Medical Society

Phase II of management study authorized by MSMS Council

Initiation of phase two of the MSMS management study was authorized by The MSMS Council April 21. The work, recommended by the MSMS House of Delegates, will complete the professional management study for the re-evaluation and reorganization of the society. Phase I of the study, implemented in 1970 by The Council, has improved efficiency, productivity, and accountability.

Medicaid payments reinstated; new appropriations needed in July

The Michigan Department of Social Services on April 22 authorized Blue Cross and Blue Shield to reinstate Medicaid payments to physicians, hospitals, pharmacies and nursing homes. The legislature failed to transfer funds or approve a supplemental appropriation for welfare payments before going on spring vacation April 8, and the Medicaid payments were stopped on April 15.

On April 21 the legislature compromised on a transfer of funds to clear the way for delivery of welfare checks, including Medicaid payments, to 11,000 recipients.

Informed sources at the Capitol said the transferred funds should last the rest of this fiscal year unless an unexpected demand again depletes them. The fiscal year ends June 30, 1971, and payments for the new fiscal year starting July 1 depend on a new appropriations bill for the Department of Social Services.

MSMS spokesman Robert C. Prophater, MD, Bay City, chairman of the MSMS Legislative Policy Committee, joined Frank J. McDevitt, DO, of the Michigan Association of Osteopathic Physicians and Surgeons, in an unprecedented joint news conference April 16 in Lansing to express MSMS and MAOPS concern about health care for the poor.

Capsules

Peer review guidelines as developed by the Committee on Utilization Review and Insurance Problems, were approved April 21 by The MSMS Council. They will be sent to county medical societies and regional medical advisory committees soon.

* * *

Members of the MSMS Committee on Alcohol and Drug Dependence urge all Michigan physicians to study and follow the guidelines for methadone maintenance programs prepared by the AMA and the National Research Council and published in the April journal of **Michigan Medicine.**

The committee is studying the problems of the physician who prescribes drugs indiscriminately, alcoholism in industry, and the possibility of including courses on alcohol and drug dependence in the medical schools' curricula.

* * *

Interested hospitals and clinics are being lined up to participate this summer in the MSMS, Michigan Hospital Association and Student American Medical Association project to place medical students into communities for 10 weeks of orientation to medical practice. More than 150 students have indicated an interest to participate in Michigan.

* * *

The MSMS Committee on Cancer and the Michigan Cancer Coordinating Committee will meet jointly May 19 at MSMS headquarters. The two groups are expected to discuss cancer registries and ways to improve the reporting and follow-up conducted through such registries.

On April 17, Michigan newspapers quoted a joint statement of 'great concern' over stoppage of Medicaid service payment checks to doctors that week, expressed by Doctor Robert C. Prophater (left) of Bay City, chairman of the Michigan State Medical Society's legislative policy committee, and Dr. Frank J. McDevitt, of Farmington, president of the Michigan Association of Osteopathic Physicians and Surgeons. The legislators took action April 21 so the Department of Social Services could release Medicaid checks and resume payments to providers.

Lt. Gov. Brickley

Lt. Gov. Brickley to open Health Congress

Michigan's Lieutenant Governor, James Brickley, will kick off the 25th annual Michigan Health Congress May 20 at Albion College, Albion. The all-day program, to be presented by the Michigan Health Council with special cooperation from the Albion Drug Abuse Committee, will emphasize the Albion committee's success in involving community and school resourses in drug education for grades K-12.

The congress will serve also as a workshop to aid other community and school health leaders in obtaining necessary funds and volunteers to establish drug and health education programs.

Medical students' costs subject of special meeting

Financial needs of medical students will be explored at a special meeting The MSMS Council has authorized the Education Liaison Committee to call this spring. The Education Liaison Committee will bring together representatives of several Michigan banks, the AMA-ERF, and medical schools. The deans of the three Michigan medical schools recently prepared for the committee a report about the financial needs of medical students. Students face serious needs because costs have increased and the amount of available money has declined.

Gov. Milliken cites four precedents for signing chiropractic-Blue Shield bill

In a personal letter from Governor Milliken to Robert Prophater, MD, chairman, MSMS Legislative Policy Committee, the Governor said he signed Public Act 251 of 1970 (Chiropractic-Blue Shield) because of four precedents. Following an audience with the Governor, Dr. Prophater received the letter which, in part, stated, "Act 92 of the Public Acts of 1966 requires insurance companies to recognize services which can legally be performed by doctors of chiropractic . . ." The Governor added, "The question before me was, if this law applies to profit plans, why should it not also apply to non-profit plans?"

The Governor said (1) Medicaid covers payments to chiropractors; (2) The Attorney General ruled Sept. 16, 1970, that chiropractors are eligible for payment under Medicaid; (3) The federal government permits medical deductions for chiropractic services on income tax returns; and (4) Claims for chiropractic care are paid by Workmen's Compensation in 48 states, including Michigan.

A delegation of five doctors from MSMS met with the Governor in late April.

CAPSULES/Cont.

Lansing has gained 19 physicians since a survey two years ago determined a need for at least 70 more doctors in 13 different specialties. John B. Kantner, Ingham County Medical Society executive secretary, reports that progress is being made in the specialties, although the Lansing area still needs family physicians and pediatricians.

* * *

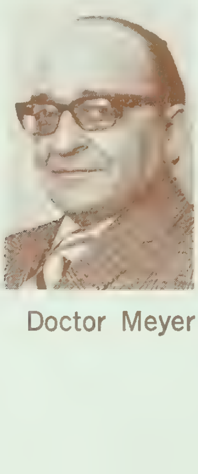
A possible policy statement about relationships between the Council on Medical Staffs and MSMS and its component societies is being developed by MSMS Committee on Hospital Relations for The MSMS Council.

* * *

Copies of the Michigan legislative directory were mailed April 13 to MSMS members, compliments of MDPAC, along with a brief report of 1970 legislative support activities. MDPAC leaders are shooting for 2,500 members in 1971.

* * *

Ruben Meyer, MD, professor of pediatrics at the Wayne State University School of Medicine, has been appointed professor and chairman of the WSU Department of Community and Family Medicine. A member of the WSU medical faculty since 1942, Doctor Meyer was named director of the medical school's new community medicine program last summer and appointed acting chairman of community and family medicine in September.



Doctor Meyer

MSU takes two major steps in development of medical school

Two key steps in the development of the College of Human Medicine as a four-year school have been taken by Michigan State University. Sidney Katz, MD, has been named first chairman of the new Office of Health Services Education and Research at MSU, effective June 1. Thomas H. Kirschbaum, MD, will chair a new department of Obstetrics, Gynecology and Reproductive Biology.

Doctor Katz is currently associate director of community health at Case Western Reserve University, while Doctor Kirschbaum is a professor of obstetrics and gynecology at the University of California-Los Angeles.

Doctor Katz

Doctor Kirschbaum

Ad hoc committee outlining MSMS views of care for aged

A proposed statement of principles for the medical care of the aged has been drafted for recommendation to The MSMS Council by the MSMS Ad Hoc Committee for the White House Conference on Aging.

The statement calls for more interest from the medical profession in the aging population, ready access for the elderly to health services, a reassessment of the income of the elderly to allow them to live in dignity, and agreement with the unofficial AMA stand that the U.S. should increase its responsibility to the elderly through catastrophic illness and long-term care insurance.

The committee has been meeting to prepare directions from the medical profession to the Michigan Conference on Aging May 25 in Lansing, and to the White House Conference on Aging in November.

Maternal Health Committee working to aid Detroit Maternal project

Members of the MSMS Maternal and Perinatal Health Committee are at work on several major projects, including their annual Gull Lake meeting May 20-21 near Battle Creek. At that meeting, the committee members will hear reports on crib deaths and a study of intensive care nurseries.

The committee is at work developing ways to see that money for the highly-successful Detroit Maternal and Infant Care Project which provides comprehensive care for about half the indigent mothers delivering babies in Detroit each year, is provided by the legislature and Wayne County. The committee would also like to develop ways to better use paramedical personnel more efficiently through the DMIC program.

In addition, the committee is preparing a resolution to the Michigan Department of Public Health to adopt a more universally and internationally accepted definition of the perinatal mortality rate.

CAPSULES/Cont.

The provision of abortion services, in the event that Michigan abortion laws are liberalized, was the topic of a conference April 23-24 in Detroit arranged by the Center for Population Planning of The University of Michigan School of Public Health. MSMS was a cosponsor of the discussion on how to handle the estimated 30,000 requests for abortions that would be considered in Michigan if the law allowed.

* * *

Laws and regulations on the dating of perishable products are being investigated by the MSMS Public Health Committee.

* * *

The fifth annual Upper Michigan Health Careers Congress is scheduled May 13 at Bay de Noc Community College in Escanaba, sponsored by the Michigan Health Council. A national health manpower consultant, educators, CHP officials and students will take part in the all-day program.

* * *

The Michigan chapter, Arthritis Foundation, is sponsoring two free public forums on arthritis at 7:30 p.m. May 11 in the Union High School auditorium, Grand Rapids, and the Central High School in Pontiac on May 27.

* * *

Names of non-members will be provided soon by MSMS to the component medical societies so they can follow up with membership recruitment programs. The names, addresses and biographic information about every doctor in Michigan were recently obtained by MSMS from the AMA. Names of those physicians who are not members of their component county medical society and MSMS or the AMA are being compiled now by the MSMS Bureau of Economic Information.

A special board appointed by MSU President Clifton R. Wharton, Jr., is attempting to answer the questions raised by Doctor Wharton's suggestion that the university population undertake a proposed group prepaid health plan. The university appears headed in the direction of such a program, but its establishment hinges largely on interest at MSU and financial resources.

* * *

Wayne State University's new $24 million basic medical science building has been renamed the Gordon H. Scott Hall of Basic Medical Sciences in honor of the late Doctor Scott. He died in 1970, two years after he retired as WSU vice president for medical school development. In that capacity he was the man most responsible for the building's construction.

* * *

Members of the MSMS Committee on Mental Health and other MSMS leaders will host appropriate committee members of the Michigan Legislature at the annual Legislator-MD Dinner May 12 at Dines Restaurant, Lansing. The group will informally discuss drugs, adequate treatment facilities, funding and other mental health matters.

* * *

An updated and complete definition of "rehabilitation" and guidelines for rehabilitation care are the goals of continuing efforts by the MSMS Committee on Rehabilitation. When completed, the definition and guidelines will be useful to physicians, nursing homes, and rehabilitation centers and hospitals.

The authors of the important article about sickle cell anemia inside this issue have written a book which is being published this month. The book, entitled "Molecular Aspects of Sickle Cell Hemoglobin: Clinical Applications," is edited by Robert M. Nalbandian, MD. The book contains a foreward by Professor Linus Pauling, twice a Nobel laureate, and it is published by the Charles C. Thomas Co. of Springfield, Ill.

MSMS delegates refining two proposals to present at AMA Convention

The MSMS delegates to the AMA are planning to propose two resolutions at the AMA Annual Convention June 20-24 in Atlantic City.

At their March 31 caucus at MSMS headquarters, the AMA delegates agreed to recommend (1) that other state medical societies encourage local communities to form loan programs to aid medical students, in return for the students practicing in those same communities for a period of time after graduation; and (2) to expand the mailing list for the AMA Newsletter, or "the green sheet."

The AMA delegates also reorganized at their March 31 meeting, re-electing all former officers. Donald N. Sweeny, Jr., MD, Detroit, continues as chairman.

Annual muscle symposium May 19 at Towsley Center

The emphasis will be on the child with disorders in walking at the annual postgraduate muscle symposium for Michigan physicians planned May 19 at Towsley Center, University Medical Center, Ann Arbor.

Keynote guest speaker for the symposium will be Kenneth Swaiman, MD, professor of pediatrics and neurology at the University of Minnesota Medical School.

Seventy Wayne medical alumni to be honored May 12

Forty-eight Michigan physicians and 21 from outside the state will be honored by the alumni of the Wayne State University School of Medicine on May 12 in Detroit. In addition, Walter H. Seegers, MD, chairman of physiology and pharmacology at the WSU School of Medicine, will be awarded the Alumni Faculty Service Award.

Doctor Seegers is world-famous for his work in blood research and he is the senior faculty member at the school. The other 69 physicians to be honored are members of the 25- and 50-year anniversary classes of the medical school.

The program at the Sheraton-Cadillac hotel concentrates on the theme "Prescription for Survival—A Conference on Environmental Health and Pollution." The Hon. James H. Brickley, lieutenant governor of Michigan, will be luncheon speaker.

VOLUME 70 Yr. 1971

Stubbed for No(s).
11 pp 507-508
For Further Information,
please inquire of the
Reference Librarian

MEDIGRAMS

LATE NEWS FROM THE MICHIGAN STATE MEDICAL SOCIETY

U. C. SAN FRANCISCO
MEDICAL CENTER LIBRARY
JUN 23 1971

Michigan Medicine

May 28, 1971, Volume 70, Number 12
Michigan State Medical Society
Reading Time: 2 Mins, 50 Seconds

NOTICE TO ALL MEMBERS:

The MSMS Council May 26 voted that all members be alerted to the following portion of the recent Michigan Department of Commerce MDC News:

"Blue Shield has instituted a service that allows its subscribers to identify participating physicians who have agreed to accept Blue Shield's rate of payment for a covered service as payment in full. Under this system, a subscriber can call his local Blue Shield office and he will be told if his physician is a participating physician. If he does not have a physician, Blue Shield will supply the names of three participating physicians in his area."

The Council also voted to notify MSMS members of the Shield Board that it disapproves of the last sentence as being "discriminatory."

MEMBERS WHO HAVE misplaced their MSMS questionnaire about "Trends in Overhead Cost of Medical Practice" will find another copy in the June issue of Michigan Medicine. Early returns are satisfactory. Many specialty groups are urging cooperation. Professional Management staffers will fill in the form for their clients free of charge.

RE LEGISLATION . . . The MSMS Council May 26 voted to support HB 4011 to register and regulate snowmobiles, now in the Senate Committee on Conservation and Tourist Industry. The bill, rewritten before passage in the House, requires registration of snowmobiles on public grounds and establishes 14 as the minimum age for operators without supervision.

MSMS also supports HB 4882 to establish a Controlled Substances Act, heavily amended in the House Judiciary Committee. Among the amendments is a statement freeing doctors from duplicating the Federal Bureau of Narcotics and Dangerous Drugs application.

MSMS COMMITTEE ON SOCIO-ECONOMICS will meet soon to study implications of reported moves at several levels to consider uniform fee schedules for Medicaid patients. A letter with details will be mailed to component society presidents.

COPY OF COUNCIL-APPROVED Peer Review Guidelines will appear in the June issue of Michigan Medicine.

MSMS LEGAL AFFAIRS COMMITTEE is following several bills and resolutions in the Legislature dealing with various aspects of medical education. Committee leaders have been invited to join the Michigan Academy of General Practice session June 11 with the three deans to discuss the recent resolution passed in both houses urging each medical school to establish a department of family practice.

THE FDA IS ASKED in resolutions adopted by Ingham County and MSMS Council "not to arbitrarily withdraw many useful combination drugs that meet standards and offer convenience and economy." Copies of the resolution are being sent to HEW, Congressmen, and others.

COPIES OF THE GOVERNOR'S special message on health care, May 18, were mailed on May 21 by the MSMS PR Committee to county medical society officers with a recommendation that they in turn "make copies available to MSMS members for their study and possible comments to the Governor." Interested members may write MSMS for a copy.

THIS FALL, the enrollment of freshman medical students at WSU will jum from 165 to 208, and at MSU from 40 to 83. U-M will again accept 225. MSMS is continuing to work for larger state appropriations to permit continuing expansion.

ABOUT 350 DOCTORS will participate in the 51st annual Coller-Penberthy-Thirlby Medical Conference July 29-30 at Traverse City.

SEVERAL MICHIGAN LEGISLATORS met May 12 to discuss federal and state legislation with the MSMS Committees on Mental Health, and also May 12 with the MSMS Committee on Public Health.

PLANS FOR ACTIVE involvement in the 1972 elections were advanced May 19 at the MDPAC Board of Directors meeting.

ON JUNE 9, representatives of the Michigan medical specialties will confer for the fifth time this year at MSMS under the leadership of MSMS President Hiscock to study matters of mutual interest.

THE MSMS BUILDING has been cited by the East Lansing Committee on Aesthetics for its "outstanding contributions to the beauty of the East Lansing community."

SAMPLES OF THE QUESTIONNAIRE to ask MSMS members to evaluate MSMS goal and operations are being pre-tested now and soon will be mailed to all members as part of the Phase II Study of MSMS, authorized by the 1970 House.

A RECOMMENDATION TO SHIFT the MSMS House of Delegates from the fall to the spring beginning in 1972 has been made by the MSMS Planning and Priorities Committee and was supported May 26 by The Council. The Council further suggested that the Delegates consider the possibilities of two sessions each year to more adequately deal with current issues.

Michigan
Medicine

MICHIGAN STATE MEDICAL SOCIETY

Published three times each month and four times in December and January, 38 issues, by the Michigan State Medical Society as its official journal. Second class postage paid at East Lansing, Mich. and at additional mailing offices. Yearly subscription rate, $9.00. Printed in USA. All communications should be addressed to the Publications Committee, Michigan State Medical Society, 120 West Saginaw Street, East Lansing, Michigan 48823. © 1971 Michigan State Medical Society. Phone: Area Code 517, 337-1351.

EDITOR: HERBERT A. AUER

Second Class Postage Paid at East Lansing, Mich.
and at additional mailing offices.

UNIVERSITY OF CAL
LIBRARY SCH OF MED
THIRD & PARNASSUS AVE
SAN FRANCISCO CAL 94122

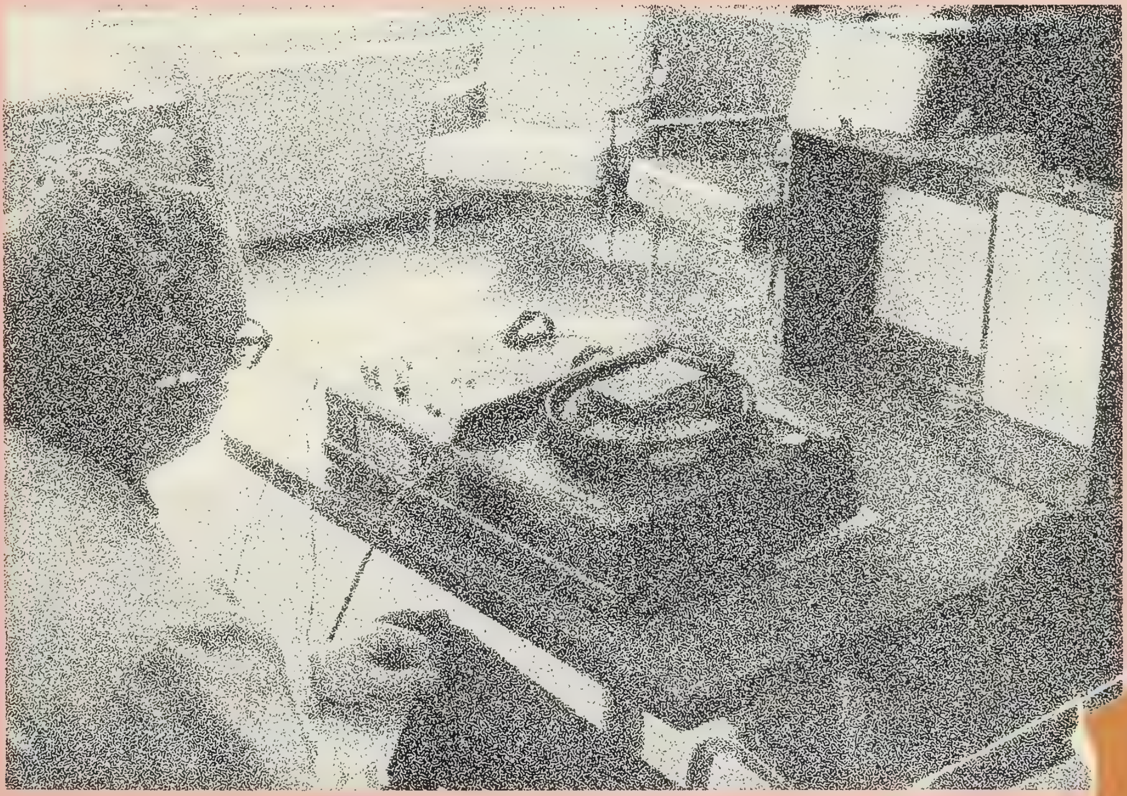
Please fill in survey form, Page 583
To help MSMS obtain information about overhead costs.

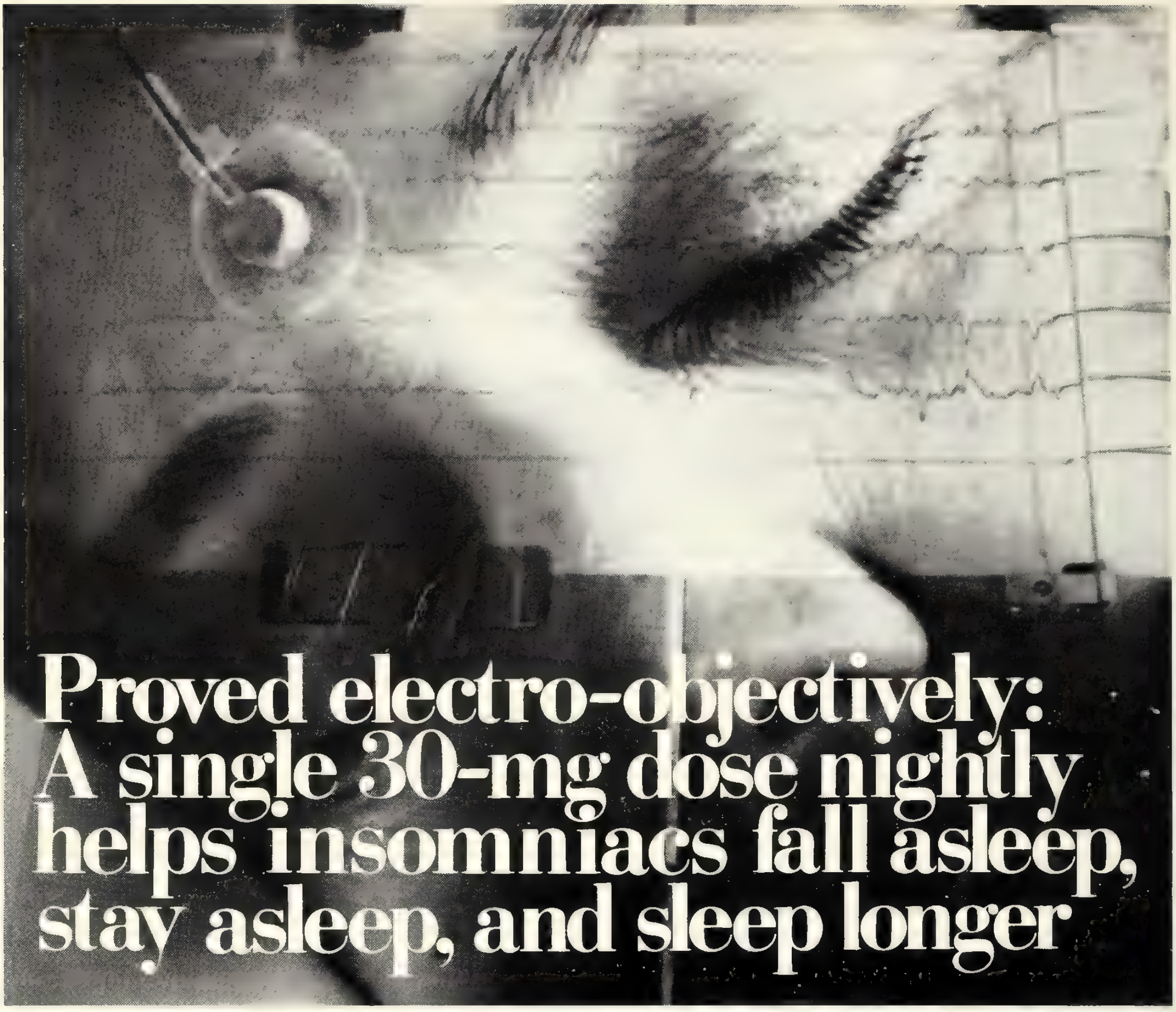
Michigan Medicine

U. C. SAN FRANCISCO
MEDICAL CENTER LIBRARY
JUN 30 1971

Michigan's MDs are strongly motivated to keep up to date, but are often frustrated at not being able to. A new pilot project offered by The U-M in community hospitals is demonstrating that practicing physicians can be 'turned on' to self-instruction. See pages 525 and 565.

'Classroom in a briefcase'





Proved electro-objectively: A single 30-mg dose nightly helps insomniacs fall asleep, stay asleep, and sleep longer

Controlled studies of 23 insomniac and 13 normal subjects treated with Dalmane (flurazepam HCl) in five sleep laboratories generated over 4000 hours of electroencephalographic, electro-oculographic and electromyographic tracings. These studies revealed that Dalmane 30 mg nightly usually induces sleep in 22 minutes and provides seven to eight hours of sleep.[1,2,3]

Moreover, Dalmane 30 mg was found to be useful in all common types of insomnia in which it was studied. Of drugs studied in a sleep laboratory,[1] Dalmane 30 mg was the only one that consistently reduced sleep induction time and maintained sleep nightly for 14 consecutive nights of use.

Confirmed clinically

Fifty-three controlled studies using a paired-night, double-blind crossover design have evaluated Dalmane clinically. In the majority of these, Dalmane (flurazepam HCl) significantly reduced sleep induction time and increased sleep duration. Dalmane and a placebo were alternated on successive nights in 2010 insomniacs, 1706 of whom were studied for a single night-pair, and the remainder for as many as fifteen paired-nights. A patient preference for Dalmane was apparent in the paired-night studies.

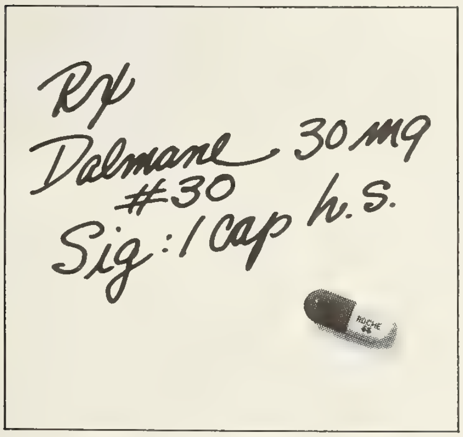
Dalmane was also preferred to certain hypnotics in two separate preference studies. In each of two double-blind studies, Dalmane 30 mg retained effectiveness for the total period of seven consecutive treatment nights, according to subjective/objective evaluations.

In summary, Dalmane is useful in all types of insomnia characterized by difficulty in falling asleep, frequent nocturnal awakenings and/or early morning awakening. It can be used effectively in patients with recurring insomnia or poor sleeping habits, and in acute or chronic medical situations requiring restful sleep.

Dalmane (flurazepam HCl) is generally well tolerated

In most instances in which adverse effects with Dalmane were reported, they were mild, infrequent and seldom required discontinuation of the drug. Dizziness, drowsiness, lightheadedness and the like were the side effects most frequently noted, particularly in elderly or debilitated patients.[3] Instances of hepatic dysfunction, paradoxical reactions (excitement) and hypotension are rare with Dalmane, and morning hang-over is relatively infrequent. In studies to date the effectiveness of Dalmane for recommended periods of use is maintained without need to increase dosage.

References: 1. Kales, A., *et al.:* "Effectiveness of Sleep Medications: All-Night EEG Studies of Hypnotic Drugs," in Proc. 7th Internat. Cong. Electroencephal. and Clin. Neurophysiol., San Diego, Calif., Sept. 13-19, 1969. **2.** Kales, A., *et al.:* "Psychophysiological and Biochemical Changes Following Use and Withdrawal of Hypnotics," in Kales, A. (ed.): *Sleep: Physiology and Pathology,* Phila., Lippincott, 1969, p. 331. **3.** Data on file, Medical Department, Hoffmann-La Roche Inc.



Before prescribing, please consult Complete Product Information, a summary of which follows:

Indications: Effective in all types of insomnia characterized by difficulty in falling asleep, frequent nocturnal awakenings and/or early morning awakening; in patients with recurring insomnia or poor sleeping habits; and in acute or chronic medical situations requiring restful sleep. Since insomnia is often transient and intermittent, prolonged administration is generally not necessary or recommended.

Contraindications: Known hypersensitivity to flurazepam HCl.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. Caution against hazardous occupations requiring complete mental alertness (*e.g.,* operating machinery, driving). Use in women who are or may become pregnant only when potential benefits have been weighed against possible hazards. Not recommended for use in persons under 15 years of age. Though physical and psychological dependence have not been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage.

Precautions: In elderly and debilitated, initial dosage should be limited to 15 mg to preclude oversedation, dizziness and/or ataxia. If combined with other drugs having hypnotic or CNS-depressant effects, consider potential additive effects. Employ usual precautions in patients who are severely depressed, or with latent depression or suicidal tendencies. Periodic blood counts and liver and kidney function tests are advised during repeated therapy. Observe usual precautions in presence of impaired renal or hepatic function.

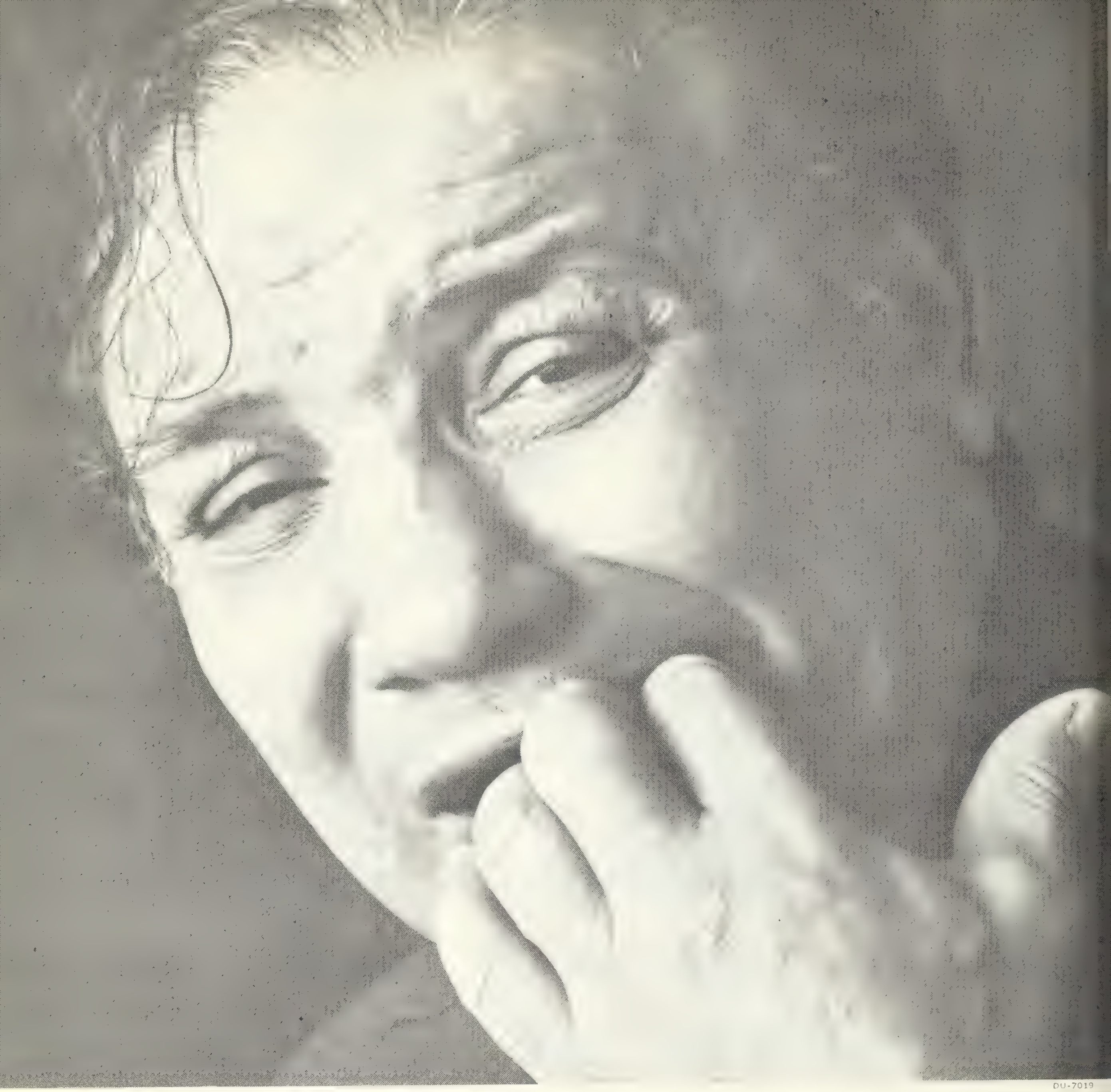
Adverse Reactions: Dizziness, drowsiness, lightheadedness, staggering, ataxia and falling have occurred, particularly in elderly or debilitated patients. Severe sedation, lethargy, disorientation and coma, probably indicative of drug intolerance or overdosage, have been reported. Also reported were headache, heartburn, upset stomach, nausea, vomiting, diarrhea, constipation, GI pain, nervousness, talkativeness, apprehension, irritability, weakness, palpitations, chest pains, body and joint pains and GU complaints. There have also been rare occurrences of sweating, flushes, difficulty in focusing, blurred vision, burning eyes, faintness, hypotension, shortness of breath, pruritus, skin rash, dry mouth, bitter taste, excessive salivation, anorexia, euphoria, depression, slurred speech, confusion, restlessness, hallucinations and elevated SGOT, SGPT, total and direct bilirubins and alkaline phosphatase. Paradoxical reactions, *e.g.,* excitement, stimulation and hyperactivity, have also been reported in rare instances.

For the sleep your patients need

New **Dalmane®**
(flurazepam hydrochloride)

ROCHE

Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110



DU-7019

Who's afraid of the
big bad enema?

We all are. But Dulcolax is the cure for enemaphobia. It can do almost anything an enema can – except look scary.

Just one suppository usually assures a predictable bowel movement in 15 minutes to an hour. Gone are the tubing, the "accidents", and the bruised egos associated with enemas.

For preoperative preparation, the combination of tablets at night and a suppository the next morning usually cleans the bowel thoroughly. Suppositories may also be particularly helpful when straining should be avoided as in postoperative care.

As with any laxative, abdominal cramps are occasionally noted. The drug is contraindicated in the acute surgical abdomen.

Dulcolax®...it's predictable
bisacodyl

[illegible] UNDER LICENSE FROM BOEHRINGER INGELHEIM G. M. B. H.

Michigan Medicine

In This Issue

SCIENTIFIC ARTICLES

525 The Michigan physician and his continuing education: Summary and conclusion; John N. Kotre, PhD; Floyd C. Mann, PhD; Neal A. Vanselow, MD
531 Ocular complications in the treatment of joint disease; Conrad L. Giles, MD
535 The Fantastic Psychopathology of Cancer Patients; C. E. Schorer, MD
537 New Placental Tissue Registry seeks support of MSMS members; Joseph R. Cipparone, MD
539 Recurrent postpericardiotomy syndrome: Its protracted nature and association with atrial septal defects; Gerald C. Timmis, MD; Seymour Gordon, MD; Renato G. Ramos, MD

SPECIAL ARTICLES

520 New report system for Medicaid performance needs doctors' support; Ross V. Taylor, MD
556 Would you believe $1 million to Michigan students from AMA-ERF? John J. Coury, MD
559 Newly-approved guidelines for MSMS Peer Review Program
565 New U-M self-study project based on Michigan Medicine articles; Judith Marr

Pages 583-584 tear out to provide Michigan physicians with opportunity to take part in MSMS Survey of Trends in Overhead Cost of Medical Practice

OTHER FEATURES

514 President's page
515 MSMS leadership
529 Drug Therapy Problems
530 Perinatal Tips
534 Monthly Surveillance Report
547 MSMS news
550 Council minutes
554 Michigan Mediscene
558 Medical care programs
568 In memoriam
585 Breaking news

MICHIGAN MEDICINE is the official organ of the Michigan State Medical Society, published under the direction of the Publication Committee. Published Semi-Monthly, Trimonthly in January and December; 26 issues, by the Michigan State Medical Society as its official journal. Second class postage paid at East Lansing, Mich. and at additional mailing offices. Yearly subscription rate, $9.00; single copies, 80 cents. Additional postage: Canada, $1.00 per year; Pan-American Union, $2.50 per year; Foreign, $2.50 per year. Printed in USA. All communications relative to manuscripts, advertising, news, exchanges, etc., should be addressed to Judith Marr, Michigan State Medical Society, 120 West Saginaw Street, East Lansing, Michigan 48823. Phone Area Code 517, 337-1351.

© 1971 Michigan State Medical Society.

SCIENTIFIC EDITOR
John W. Moses, MD

EXECUTIVE EDITOR
Herbert A. Auer

MANAGING EDITOR
Judith Marr

PUBLICATION COMMITTEE

Robert M. Leitch, MD
Battle Creek
Chairman

Donato F. Sarapo, MD
Adrian

Edward J. Tallant, MD
Detroit

INFORMATION FOR CONTRIBUTORS

1. Address scientific manuscripts to the Publication Committee, Michigan State Medical Society, 120 West Saginaw Street, East Lansing, Michigan 48823. Submit original, double-spaced typewritten copy and two carbon copies or photo copies on letter size (8½ x 11 inch) paper. On page one, include title, authors, degrees, academic titles, and any institutional or other credits.

2. Authors are responsible for all statements, methods, and conclusions. These may or may not be in harmony with the views of the Editorial Staff. It is hoped that authors may have as wide a latitude as space available and general policy will permit. The Publication Committee expressly reserves the right to alter or reject any manuscript, or any contribution, whether solicited or not.

3. Illustrations should be submitted in the form of glossy prints or original sketches from which reproductions will be made by Michigan Medicine.

4. Articles should ordinarily be less than four printed pages in length (3000 words).

5. References should conform to *Cumulative Index Medicus,* including, in order: Author, title, journal, volume number, page, and year. Book references should include editors, edition, publisher, and place of publication, as well.

6. The editors welcome, and will consider for publication, letters containing information of interest to Michigan physicians, or presenting constructive comment on current controversial issues. New items and notes are welcome.

7. It is understood that material is submitted for exclusive publication in Michigan Medicine.

President's Page

H. H. Hiscock, M.D.
MSMS President

MSMS meets challenge of economics through new bureau

We are coping with the advent of specialized instrumentation and improved techniques of medical practice. But the Michigan State Medical Society also must meet the challenges of the 70's in the area of socio-economics. MSMS is meeting this challenge and will extend its expertise into this field through the creation of the Bureau of Economic Information.

The 1970 House of Delegates recognized the need for MSMS to play a more important role in the field of medical socio-economics. With the widening influence government plays in the delivery of health care, it is imperative to have respresentation in the economics of medicine. And so, the Bureau of Economic Information was created to lend support and work with the Committee on Medical Socio-Economics.

In April, the Council approved the appointment of three advisors to the Bureau. They are Dale L. Kessler, MD, chairman of the Medical Socio-Economics Committee, Brooker L. Masters, MD, chairman of the Planning & Priorities Committee, and Robert E. Rice, MD, chairman, Committee on Governmental Medical Care Programs. These men will offer direction and help establish priorities for the new Bureau.

Two major projects that the Council approved, and that the bureau is currently undertaking, are the surverys on overhead costs of medical practice, and physician fees. The work being performed on these two surveys has come under the direction of Doctor Kessler and the Committee on Medical Socio-Economics. Working with the committee, the bureau is now receiving completed surveys on overhead costs, and the other survey is soon to follow.

The MD has had a great deal of public abuse and allegations directed toward him concerning many areas. But probably most of the abuse stems from the notion of increased costs of health care. Without proper support data the MD has had no recourse to these allegations. Governmental legislation quotes facts and public allegations quote facts, but the medical societies do not because they do not have the real facts.

In order for your society to answer these allegations, MSMS must have the help of each of its members. Only through your cooperation and support will the Bureau of Economic Information be able to supply worthwhile and important data. This bureau is designed to supply your medical society with a new tool. Your cooperation will keep it sharp; don't let it get rusty.

MSMS Leadership

PRESIDENT: Harold H. Hiscock, MD, Flint
PRESIDENT-ELECT: Sidney Adler, MD, Detroit
SECRETARY: Kenneth H. Johnson, MD, Lansing
ASST. SECRETARY: Brooker L. Masters, MD, Fremont
TREASURER: John R. Ylvisaker, MD, Pontiac
ASST. TREASURER: C. Allen Payne, MD, Grand Rapids
SPEAKER: Vernon V. Bass, MD, Saginaw
VICE-SPEAKER: James D. Fryfogle, MD, Detroit
PAST PRESIDENT: Robert J. Mason, MD, Birmingham

COUNCIL CHAIRMAN: Ross V. Taylor, MD, Jackson
VICE-CHAIRMAN: Brooker L. Masters, MD, Fremont
DIRECTOR: Warren F. Tryloff, East Lansing
GENERAL COUNSEL: Lester P. Dodd, Detroit
LEGAL COUNSEL: A. Stewart Kerr, Detroit
SCIENTIFIC EDITOR: John W. Moses, MD, Detroit
ECON. CONSULTANT: Clyde T. Hardwick, Houghton
HISTORIAN: Wm. J. Stapleton, Jr., MD, Detroit
ASST. HISTORIAN: Wm. M. LeFevre, MD, Muskegon

AMA DELEGATES
- Otto K. Engelke, MD, Ann Arbor
- John R. Heidenreich, MD, Daggett
- Luther R. Leader, MD, Royal Oak
- Robert E. Rice, MD, Greenville
- John J. Coury, MD, Port Huron
- George W. Slagle, MD, Battle Creek
- Donald N. Sweeny, Jr., MD, Detroit (Chairman)
- Joseph A. Witter, MD, Rochester

ALTERNATES
- John W. Moses, MD, Detroit
- Paul T. Lahti, MD, Royal Oak
- Harold A. Furlong, MD, Pontiac
- Bradley M. Harris, MD, Ypsilanti
- James C. Danforth, Jr., MD, Detroit
- Marjorie Peebles Meyers, MD, Detroit
- Robert C. Prophater, MD, Bay City
- Vernon V. Bass, MD, Saginaw

First District Councilors: (Wayne County)
- Edward J. Tallant, MD, Detroit
- Ralph R. Cooper, MD, Detroit
- Frank G. Bicknell, MD, Detroit
- Milton R. Weed, MD, Grosse Pointe Park
- Brock E. Brush, MD, Detroit

Second District Councilor: Ross V. Taylor, MD, Jackson
Counties: Clinton, Eaton, Hillsdale, Ingham, Jackson

Third District Councilor: Robert M. Leitch, MD, Battle Creek
Counties: Branch, Calhoun, St. Joseph

Fourth District Councilor: W. Kaye Locklin, MD, Kalamazoo
Counties: Allegan, Berrien, Cass, Kalamazoo, Van Buren

Fifth District Councilor: Noyes L. Avery, MD, Grand Rapids
Counties: Barry, Ionia-Montcalm, Kent, Ottawa

Sixth District Councilor: Ernest P. Griffin, Jr., MD, Flint
Counties: Genesee, Shiawassee

Seventh District Councilor: John J. Coury, MD, Port Huron
Counties: Huron, Sanilac, Lapeer, St. Clair

Eighth District Councilor: A. Carl Stander, MD, Saginaw
Counties: Gratiot-Isabella-Clare, Midland, Saginaw, Tuscola

Ninth District Councilor: Adam C. McClay, MD, Traverse City
Counties: Grand Traverse-Leelanau-Benzie, Manistee, Northern Michigan (Antrim, Charlevoix, Cheboygan and Emmet combined), Wexford-Missaukee

Tenth District Councilor: Robert C. Prophater, MD, Bay City
Counties: Alpena-Alcona-Presque Isle, Bay-Arenac-Iosco, North Central Counties, (Otsego, Montmorency, Crawford, Oscoda, Roscommon, Ogemaw, Gladwin and Kalkaska, combined)

Eleventh District Councilor: Brooker L. Masters, MD, Fremont
Counties: Mason, Mecosta-Osceola-Lake, Muskegon, Newaygo, Oceana

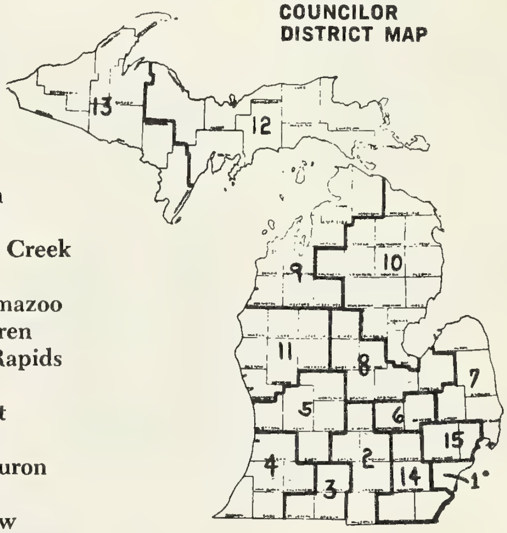
Twelfth District Councilor: William A. LeMire, Sr., MD, Escanaba
Counties: Chippewa-Mackinac, Delta-Schoolcraft, Luce, Marquette-Alger

Thirteenth District Councilor: Donald T. Anderson, MD, Wakefield
Counties: Dickinson-Iron, Gogebic, Houghton-Baraga-Keweenaw, Menominee, Ontonagon

Fourteenth District Councilor: Donato F. Sarapo, MD, Adrian
Counties: Lenawee, Livingston, Monroe, Washtenaw

Fifteenth District Councilor: Sydney Scher, MD, Mount Clemens
Counties: Macomb, Oakland

COUNCILOR DISTRICT MAP



Final details for the banquet program are discussed by Darrell E. Statzer, MD, left, Detroit, conference chariman, and Richard T. Mellis, MD, Kalamazoo, chairman of the sponsoring MSMS committee, at the 10th Annual Michigan Conference on Maternal and Perinatal Health in Lansing.

MSMS President Harold H. Hiscock, MD, far right, and Mrs. Hiscock, far left, were among the honored guests at the 1971 conference at the Olds Plaza in Lansing. Here they visit with Doctor and Mrs. Ralph Steffe, Flint.

Views on population control are exchanged between George J. Langmyhr, MD, left, medical director, Planned Parenthood World Population, New York City, and Joseph R. Cipparone, MD, Lansing, before Doctor Langmyhr gave the banquet address.

Maternal Health Conference explores population control

Relaxing at the 1971 Conference on Maternal and Perinatal Health is James E. Harryman, MD, center, of Muskegon, the former chairman of the MSMS Committee on Maternal and Perinatal Health. The annual conferences are always well attended by nurses, who join with the doctors to learn more about healthy mothers and babies.

MICHIGAN STATE MEDICAL SOCIETY

ORIENT ADVENTURE®

$898 Per Person
Plus $35 Tax and Service

Discover two of the most exciting cities in the world—**TOKYO and HONG KONG.** For 14 days live in a world you've only dreamed of: Geishas . . . the Ginza . . . pagodas . . . luxurious hotels . . . exquisite dining. Places and people you'll never forget.

Orient Adventure offers you the unique chance to explore on your own or take advantage of group activity. Sightsee, shop, golf, nightclub . . . it's your vacation and the choice is yours.

Here's what is included:
Direct flights via World Airways 707 private jets, featuring stretch-out seating . . . deluxe hotels . . . full American breakfasts and gourmet dinners at a selection of the finest restaurants in each city . . . 100 pounds baggage allowance . . . transfers . . . tips . . . and much more.

DEPARTING:
Detroit on Monday, October 11, 1971

RETURN THIS COUPON NOW!

Send to: Michigan State Medical Society
Box 950, East Lansing, Mich. 48823

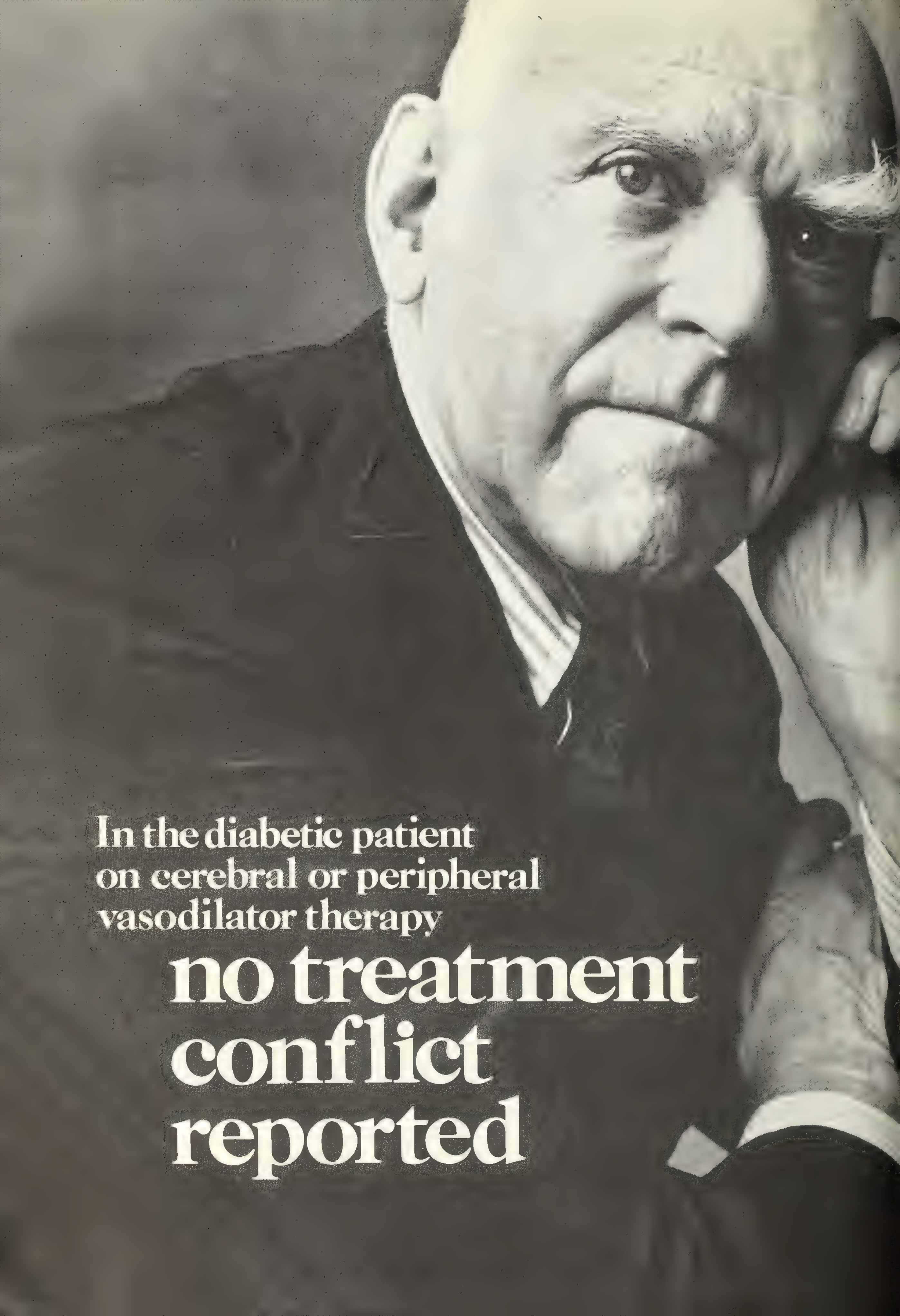
Enclosed is my check for $_______($100 per person) as Orient Adventure deposit.

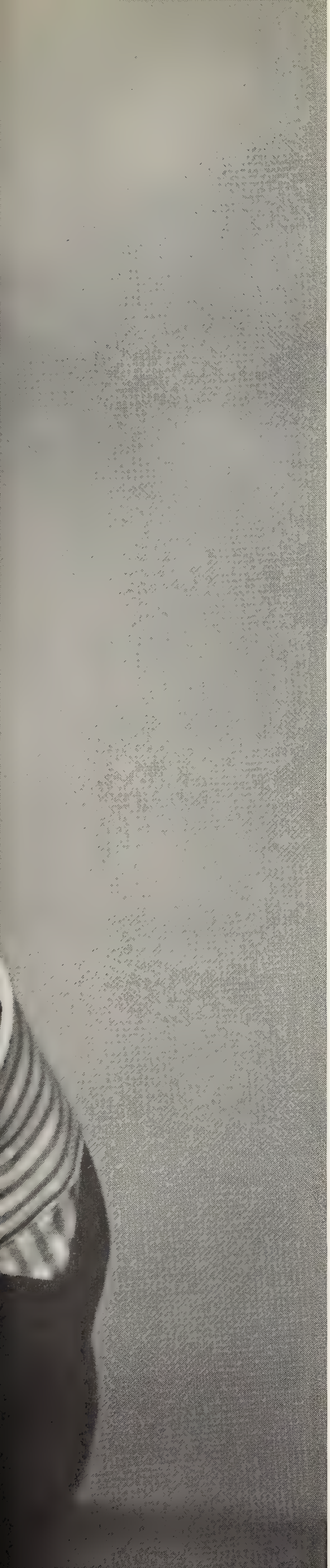
NAME

ADDRESS

CITY STATE ZIP PHONE

MAKE YOUR RESERVATIONS EARLY—SPACE STRICTLY LIMITED!


In the diabetic patient
on cerebral or peripheral
vasodilator therapy
no treatment
conflict
reported



VASODĪLAN®

(ISOXSUPRINE HCl)

the compatible vasodilator

- no interference with diabetic control ...does not alter carbohydrate metabolism.[1]
- conflicts have not been reported with diuretics, corticosteroids, antihypertensives or miotics.
- complications in the treatment of coronary insufficiency, hypertension, peptic ulcer, glaucoma and liver disease have not been reported.

In fact, there are no known contraindications in recommended oral doses other than it should not be given in the presence of frank arterial bleeding or immediately postpartum.

Although not all clinicians agree on the value of vasodilators in vascular disease, several investigators[2-5] have reported favorably on the effects of isoxsuprine. Effects have been demonstrated both by objective measurement[3,5] and observation of clinical improvement.[2,4] **Indications:** Cerebrovascular insufficiency, arteriosclerosis obliterans, diabetic vascular diseases, thromboangiitis obliterans (Buerger's disease), Raynaud's disease, postphlebitic conditions, acroparesthesia, frostbite syndrome and ulcers of the extremities (arteriosclerotic, diabetic, thrombotic). **Composition:** VASODĪLAN tablets, isoxsuprine HCl 10 mg, and 20 mg. **Dosage:** Oral—10 to 20 mg. t.i.d. or q.i.d. **Contraindications and Cautions:** There are no known contraindications to recommended oral dosage. Do not give immediately postpartum or in the presence of arterial bleeding. **Side Effects:** Occasional palpitation and dizziness can usually be controlled by dosage reduction. Complete details available in product brochure from Mead Johnson Laboratories. **References:** (1) Samuels, S. S., and Shaftel, H. E.: J. Indiana Med. Ass. *54*:1021-1023 (July) 1961. (2) Clarkson, I. S., and LePere, D. M.: Angiology *11*:190-192 (June) 1960. (3) Horton, G. E., and Johnson, P. C., Jr.: Angiology *15*:70-74 (Feb.) 1964. (4) Dhrymiotis, A. D., and Whittier, J. R.: Curr. Ther. Res. *4*:124-128 (April) 1962. (5) Whittier, J. R.: Angiology *15*:82-87 (Feb.) 1964.

Mead Johnson
LABORATORIES

© 1971 MEAD JOHNSON & COMPANY • EVANSVILLE, INDIANA 47721 U.S.A. 184071

New report system for Medicaid performance needs doctors' support

By Ross V. Taylor, MD
Chairman, MSMS Council

The cooperation of every medical society and every doctor of medicine is solicited by the MSMS Council in the implementation of the new Medicaid Performance, Surveillance, and Utilization Report System. The system is being developed by the Michigan Department of Public Health under contract from the Department of Social Services. The latter is the single state agency that is responsible for Title XIX in Michigan.

The Health Department project is the process by which management information, provider profile and recipient profile data will be accumulated, reported and studied.

In October, 1970, MSMS and the Michigan Association of Osteopathic Physicians and Surgeons were invited to recommend practicing physicians who could contribute to the system. That November The Council authorized that practicing physicians be recommended by MSMS to the project. Members of The Council were asked to submit suggestions and on January 21 four names were recommended to the Health Department team.

The osteopathic association has also designated consultants to the project.

Following is an explanation of the developing system: In the development of a useful and workable system, the health department recognized a need to establish a plan that can operate by "exception reporting," making it unnecessary to review individual claims under the Title XIX Program. MSMS was therefore invited to recommend consultants who could, from the practicing physician viewpoint, aid in setting the level at which the "exceptions" come up for review. By "exceptions" the department of health does not mean individual cases but specifically is referring to patterns of care and area or hospital variations and length of stay where marked variations are found.

The surveillance system will not monitor payment levels; this is the responsibility of other departments and other sub-systems. The system's primary responsibility will be patterns of care.

The MSMS Council believes that there is no alternative but to accept every opportunity that will enable organized medicine to influence the shape of federal programs in order that county and state medical society peer review mechanisms can be utilized in the best interests of our member-physicians.

The Department of Social Services has the legal responsibility for monitoring a $300,000,000 payout. If MSMS chose not to recommend practicing physicians to serve as consultants to the project, it is certain that the project team would do it themselves and perhaps with lay people rather than practicing physicians. Of course, such exception levels are already available from the Department of Health, Education and Welfare, and Commission on Professional and Hospital Activities of Ann Arbor. Already two reports have been issued by the Social Security Office of Research and Statistics, comparing length of stay by Medicare regions.

Payment screens already are established by the current fiscal intermediaries for the Title XIX program. MSMS had no voice in the establishment of these screens and cannot obtain any information which will assist peer review. This is in contrast to the present opportunity with Medicaid, whereby utilization, frequency of use patterns, duration of hospital stays and other data will be provided to the medical profession. The input by MSMS representatives to enable initial "exception reporting" of the patterns is the first step in peer review and therefore this would conform to MSMS and AMA policy that peer review be performed by physicians.

Furthermore all such unusual patterns will be referred to the appropriate provider or peer review mechanism.

The AMA, as well as MSMS, has repeatedly and forcefully urged peer review by physicians. Physicians could not possibly review every claim that went into the Medicaid program. There has to be some sorting of claims so that the "exceptions" can be referred to a committee of physicians for review.

The Council on March 10 reconfirmed its November 4 action to supply consultants to the program. These physician consultants to the surveillance program will report progress to The Council on a regular basis.

The health department reports that it will take about a year for it to complete the structure of its new program. Cooperation in this project provides an avenue through which the judgment of

(Continued on Page 523)

check these figures...

they could lead to savings

Umbrella Excess Liability Policy — Our Schedule

- ✓ Physicians Class 1 & 2 . . $121.00 Annual Premium*
- ✓ Physicians Class 3, 4 & 5 . $205.00 Annual Premium*

* The above premiums assume ownership or use of 2 residences, 2 automobiles, professional liability exposure (basically insured for $100,000/$300,000), and professional office premises exposure. These premiums do not include basic Malpractice coverage. The Umbrella plan is sponsored by the Michigan State Medical Society while the basic Malpractice policy is **not**.

CALL US COLLECT (517) 484-2578

bps **BEN P. STRATTON AGENCY, INC.**
ESTABLISHED IN 1937

107 N. BUTLER BLVD.
LANSING, MICHIGAN 48903
(517) 484-2578

19400 WEST TEN MILE ROAD
SOUTHFIELD, MICHIGAN 48075
357-5083

when manhood ebbs... or is delayed due to testicular hormonal insufficiency

What nature denies, Halotestin may replace. That's the purpose of this orally active androgen in conditions such as impotency, eunuchoidism, and eunuchism. The most widely used agent of its kind, Halotestin is replacement therapy with approximately five times the potency of oral methyltestosterone. And, at its recommended daily dosage of 2 to 10 mg., Halotestin is economical as well as convenient. Of course, you will want to employ androgens carefully in young boys to avoid premature epiphyseal closure... and in the elderly where possible sodium retention may, minimally, precipitate edema. Tablets of 2, 5, and 10 mg.

Halotestin® 5 mg. tablets
[fluoxymesterone Upjohn]

oral replacement with parenteral-like potency

Please see facing column for summary of contraindications, precautions, and adverse reactions.

Upjohn The Upjohn Company, Kalamazoo, Michigan 49001

Halotestin®
(fluoxymesterone, Upjohn)

Orally active androgen about 5 times as potent in anabolic and androgenic activity as methyltestosterone. Halotestin (fluoxymesterone) induces significant retention of calcium and potassium, but retention of sodium not marked. Doses below 20 mg. daily have little effect in producing creatinuria.
Indications *Male:* Replacement therapy in testicular hormone deficiency states. Prevents atrophy of the accessory male sex organs following castration for as long as therapy is continued. Impotence and male climacteric symptoms when due to androgen deficiency. Primary eunuchoidism and eunuchism. Delayed puberty when established as not a simple familial trait. Indicated for those symptoms of panhypopituitarism related to hypogonadism, however, appropriate adrenal cortical and thyroid hormone replacement therapy remain of primary importance. *Female:* Palliation of androgen-responsive, advanced, inoperable breast cancer in women between 1 and 5 years postmenopausal or women in whom castration has shown the tumor to be hormone dependent. Prevention of postpartum breast manifestations of pain and engorgement; there is no satisfactory evidence that this drug prevents or suppresses lactation per se. In osteoporosis androgens may be of adjunctive value to adequate considerations of diet, calcium balance, physiotherapy and general health promoting measures. *Males and Females:* In the treatment of protein depletion states which occur in geriatric patients, in debilitation states, in chronic corticoid therapy, resistant fractures; cryptorchidism; creating a positive nitrogen balance, tissue repair and other anabolic effects. Androgenic steroids may produce a response in aplastic anemias, myelofibrosis, myelosclerosis, agnogenic myeloid metaplasia and hypoplastic anemias due to malignancy or myelotoxic drugs. Androgens are not of value in other anemias.
Contraindications Pregnancy (may virilize female fetus), mammary carcinoma in the male, prostatic carcinoma, severe liver disease, severe cardiorenal disease and severe persistent hypercalcemia.
Precautions Employ with caution in young boys to avoid precocious sexual development and premature epiphyseal closure. Androgens tend to promote retention of sodium and water, therefore, watch for edema—particularly in the elderly. Incidence and severity of edema have been minimal and have been associated only with high doses used for palliation of breast cancer. Hypercalcemia may occur, particularly in patients with metastatic breast carcinoma; if this occurs the drug should be discontinued. Changes in liver function tests, such as increased BSP retention and SGOT levels, can occur during therapy. Jaundice has been rarely reported. If liver function tests are altered, discontinue medication or reduce dose. Priapism is indicative of excessive dosage and is indication for temporary withdrawal of drug. When treating protein depletion states or osteoporosis, an adequate diet should be provided and prolonged immobilization avoided whenever possible. When treating aplastic or hypoplastic anemias, androgen therapy should not replace other measure such as transfusion, correction of iron deficiency, antibacterial therapy, and the use of corticosteroids.
Adverse reactions Nausea, dyspepsia, menstrual irregularities, hepatic dysfunction, priapism, edema, precocious sexual development, and premature epiphyseal closure in young patients have been reported. *Male*—Prolonged administration or excessive dose may cause inhibition of testicular function with oligospermia and decreased ejaculation volume. *Female*—Large doses or prolonged administration may produce masculinization with signs such as hirsutism, deepening of the voice, enlargement of the clitoris, acne, and sometimes, increased libido.
Supplied *Tablets: 2 mg.*, scored—bottles of 100./*5 mg.*, scored—bottles of 50./*10 mg.*, scored—bottles of 50.
For additional product information, see your Upjohn representative or consult the package circular.

Upjohn The Upjohn Company, Kalamazoo, Michigan
JA68-7627-R MED B-5-S (LQX)

physicians can constructively influence the quality and delivery of medical care.

While this project gets underway, MSMS committees and The Council are working to improve peer review procedures,

The Council is aware that the requirement for a peer review mechanism for governmental medical care programs probably will become federal law. In anticipation of this, the Committee on Utilization Review and Health Insurance Problems, with the assistance of the MSMS Legal Counsel is preparing groundwork so that MSMS will be able to establish separate entities such as medical foundations to provide peer review services.

In all these related concerns, I believe The Council members honestly believe that they are helping to maintain high standards of medical practice, assuring appropriate use of health care personnel and facilities, seeking adequate financial reimbursement for services provided, and showing their awareness of the need to conserve the patient's health care dollar.

(Copies of the federal and state legislative history of Medicaid, including its medical management system—with performance, surveillance and utilization review reporting sub-system, are available on request from MSMS headquarters.)

Doctors, please return preschool vision reports to local departments

The Vision Section of the Michigan Department of Public Health wants to be sure that no child who needs medical care does not get it. And the only way the MDPH is sure this doesn't happen is to get reports back from physicians on referrals resulting from screening programs.

Thus, it is very important that Michigan physicians complete and return the "Doctor's Vision Report for Preschool Child," a green card drafted and approved by the MSMS Committee on Eye Care.

Every day in Michigan, 400 referrals are made as a result of the MDPH's vision screening programs. But the Eye Care Committee emphasizes that the department must have a report on each child and reports are most complete and accurate coming from the physician.

The green cards are to be returned to the physician's local health department, not to the MDPH. Further information may be obtained from Ed Radke, chief, Vision Section, Bureau of Maternal and Child Health, MDPH.

Now
available for your
prescribing
needs

Cordran® Tape
Flurandrenolide Tape (4 mcg. per sq. cm.)

Additional information available upon request • Eli Lilly and Company, Indianapolis, Indiana 46206

Lilly

The Michigan physician and his continuing education:

–*Summary and conclusion*

By John N. Kotre, PhD
Floyd C. Mann, PhD
Neal A. Vanselow, MD
Ann Arbor

(Last in a series)

This final article summarizes the major findings of the Michigan Physician survey. Conclusions regarding the statewide sample of medical doctors are presented first. These are followed by summary statements concerning the statewide sample of osteopaths and the two purposive samples of especially competent physicians—doctors' doctors and informal/formal consultants.

Medical Doctors in Michigan

The most important findings about practicing doctors of medicine in the state at large were:

1. Most doctors felt it was of great importance to have the opportunity to utilize their present knowledge and skills and to acquire new knowledge and skills. These were reported to be substantially more important than a number of other work needs, for example, earning a good salary. While doctors felt there was ample opportunity to meet their need for a good salary, their replies suggested considerable frustration at not being able to grow professionally and learn new knowledge and skills.[2]

2. Although only three percent of the state's medical doctors thought they were below average in ability, most were worried about how good a job they were doing. This concern, in fact, was the most prevalent of those reported by doctors. Also sources of worry were the effective use of time and feeling that one was not keeping up to date.[6]

3. There was clear evidence that the greatest sources of stimulation for quality performance and keeping up to date were standards internal to the physician. By comparison, the presence of physician colleagues provided only a moderate source of stimulation.[1]

4. Doctors did not feel their knowledge was in any greater danger of becoming obsolete than that of a number of other professionals. In fact, doctors saw their knowledge as slightly less vulnerable.[6]

5. Most doctors had paid subscriptions to three or four medical journals and spent about three hours per week reading them. Along with professional or scientific meetings, periodical literature was the most highly valued medium of continuing education.[3]

6. In a period of two years, doctors attended an average of three professional meetings sponsored by regional or national medical organizations. The majority, however, did not attend a postgraduate course sponsored by the University of Michigan, Wayne State University, or other schools. Along with periodical literature, professional meetings were the most highly valued medium of continuing education. Postgraduate courses were thought of less well.[4]

7. Group discussions, in the form of study groups or journal clubs, were considered the most valuable method of education involving contact with other physicians. They were considered more valuable than informal contacts and formal consultation. Relatively little time, however, was given by physicians to such discussions.[5]

8. Audio tapes were considered the most valuable of five technical media of education. They, too, were little used in comparison with the value reportedly derived from them. Most technical media were little used and poorly thought of as channels of education.[5]

9. Overall, doctors thought of the education available in their hospitals as fair to good. There was a dramatic relationship between hospital size and the perceived quality of its potential for education: doctors at larger hospitals were considerably more positive about the education available to them than doctors at smaller hospitals.[1]

10. Overall, doctors considered the education available at the statewide level in Michigan as good to excellent.[1]

11. The major obstacles to engaging in more formal education were the constraints of practice:

Scientific Papers

Doctors Kotre and Mann are with the Center for Research on Utilization of Scientific Knowledge of the Institute for Social Research. Doctor Vanselow is with the Department of Postgraduate Medicine. All three are at the University of Michigan, Ann Arbor.

"There was clear evidence that the greatest sources of stimulation for quality performance and keeping up to date were standards internal to the physician."

lack of time, schedule conflicts, difficulties in obtaining a covering physician. These were more serious impediments than the lack of relevant offerings or the financial loss incurred in leaving one's practice. Solo practitioners encountered the greatest difficulty in obtaining a covering physician.[7]

12. Doctors were most receptive to suggestions for yearly clinical reviews and in-hospital programs that use regular meetings for educational purposes. The majority would be willing to complete an inventory of diagnostic skills to aid in establishing an in-hospital program. Doctors were least receptive to suggestions for two-way radio or TV and for lengthy residency-like programs.[7]

13. Fully one-third of the doctors sampled were over the age of 55. Doctors this old tended to be less assured of their ability as physicians, to attach less importance to a number of work opportunities, to feel fewer opportunities were available to them, and to worry less about a variety of professional concerns. They spent less time reading periodicals and had fewer contacts with other physicians (more were in solo practice). They were less positive about the value of medical journals and professional meetings, although they tended to be more positive about the educational opportunities in the state as a whole. Overall, this sizeable proportion of elderly physicians was aware of educational deficiencies but relatively unmotivated to correct them.[1-6]

Special attention was called by the data to the situation of the 27 percent of the state's medical doctors in general practice:

1. Forty-five percent of the general practitioners in the statewide sample were over the age of 55. This contrasted with 33 percent in the state at large and 11 and 12 percent of those doctors nominated by their peers as being most competent. Consequently, as subsequent summary statements indicate, general practitioners manifested many of the characteristics of elderly physicians.[1]

2. General practitioners were less confident than others of their ability and shared the opinion of their peers that the knowledge of general practitioners *as a group* was in great danger of obsolescence. Yet they were not characterized by a strong motivation to overcome their deficiency: they attached less importance to a number of work opportunities, did not experience a greater amount of worry about keeping up to date, and failed to see themselves *as individuals* in great danger of obsolescence.[2, 6]

3. Over two-thirds of the state's general practitioners (compared with a statewide average of 52 percent) were in solo practice, and consequently general practitioners experienced the greatest amount of difficulty obtaining a covering physician. More general practitioners than others were affiliated with small hospitals and fewer were members of and active in professional societies. General practitioners spent less time in contacts with other physicians and derived less stimulation from these contacts. In brief, they were more isolated than others from their colleagues.[1, 5, 7]

4. General practitioners subscribed to fewer journals than did others and were less positive about the educational value of periodical reading.[3]

5. General practitioners attended fewer professional meetings than did others and were less positive about their educational value.[4]

6. General practitioners were more positive than others about the typical postgraduate course and about the education available in the state at large.[1, 4]

To attempt an even briefer summary of these findings, we have discovered that medical doctors were strongly motivated to keep up to date but were often frustrated at not being able to do so. Journals and professional meetings were valued educational media. Audio tapes and study groups were underused in comparison with their reported educational efficacy. A third of the state's doctors were over 55 and experienced less motivation to function at full professional capacity.

The situation of the state's general practitioners merited special attention. They were substantially older than others, aware of deficiencies in their professional knowledge, yet less motivated to overcome them. They were more isolated than others and showed evidence of less educational activity.

Doctors of Osteopathy in Michigan

A number of statements about Michigan's doctors of osteopathy may be made by noting where they differed most substantially from the state's medical doctors on each of the summary points:

1. Osteopaths attached more imporance than medical doctors to a number of work opportunities but felt fewer of these opportunities were available to them. Thus the gap between work needs and opportunities was considerably larger for osteopaths than for medical doctors.[2]

2. While confident of their overall effectiveness as physicians, osteopaths were less so than medical doctors. They experienced considerably more professional worry, chiefly in the areas of competent performance and keeping up to date.[6]

3. Osteopaths reported slightly less stimulation from internal standards and physician colleagues and somewhat more from patients and administrators.[1]

4. More osteopaths than medical doctors thought their own professional knowledge was in danger of becoming obsolete.[6]

5. Osteopaths subscribed to fewer medical journals and thought less highly of them as sources of information.[3]

6. Osteopaths attended more professional meetings but were less convinced of their educational value. They attended more in-state postgraduate courses and fewer out-of-state courses. While less enthusiastic about the value of the "typical" course, they were more positive about Wayne State offerings.[4]

7. Osteopaths spent a bit more time in informal discussions with other physicians and obtaining formal consultation. They were more positive about group discussion in the form of study groups or journal clubs.[5]

8. Osteopaths made greater use of and gave higher evaluations to technical media of education, in particular audio tape recordings and records.[5]

9. Osteopaths who were affiliated with smaller hospitals were less positive about the quality of in-hospital education.[1]

10. Osteopaths were more favorable than medical doctors about the quality of education available in the state at large. This was predictable on the basis of their relatively frequent attendance at courses within the state. [1, 4]

11. Slightly more osteopaths than medical doctors were in solo practice. Hence osteopaths were more inclined to say practice constraints (and loss of income from practice) prevented their attendance at more formal educational activities.[7]

12. Osteopaths were consistently more receptive to suggestions for innovations in continuing education.[7]

13. Osteopaths were substantially younger than the sample of medical doctors, only 14 percent being over the age of 55. This would appear to explain some—but not all—of the differences enumerated above.[1]

14. Finally, considerably more osteopaths (66 percent) than medical doctors (27 percent) were in general practice. Osteopaths were similar to the 27 percent of the medical doctors in general practice in feeling less confident about their ability as physicians and thinking that general practitioners were in danger of obsolescence. The two groups were alike in the lower use and evaluation they made of the journal, in their low opinion of the professional meeting, and in their relatively positive outlook on the quality of statewide education. But osteopaths were not as isolated as medical doctors in general practice, and they exhibited considerably more motivation to upgrade their storehouse of professional knowledge and skills.[1-6]

In brief, osteopaths were characterized by a relatively high sense of urgency to acquire new knowledge and skills. They were fairly positive about educational activities at the statewide level but felt their local hospital needed substantial improvement as an educational site.

Criterion Physicians

The following can be said of the two purposive samples nominated by physician colleagues as being particularly competent physicians—the doctors' doctors and consultants. Each statement is made by way of contrast with the general sample of medical doctors:

1. Criterion physicians attached greater importance than medical doctors at large to a variety of work needs and they said more opportunities were actually open to them.[2]

2. Although more confident about their effectiveness as physicians, criterion doctors were still more concerned about doing a good job and keeping up to date. They were less worried about professional advancement.[6]

3. Criterion physicians said they derived more professional stimulation from internal standards and physician colleagues.[1]

4. Criterion physicians—for the most part specialists—were even more concerned about the obsolescence of general practitioners than were doctors in the statewide sample. They were neither more nor less concerned about their own obsolescence.[1, 6]

5. Criterion doctors subscribed to more medical journals and were more accustomed to skim or scan them instead of reading entire aticles. They derived more educational value from periodical literature.[3]

6. Criterion physicians attended more professional meetings and perceived greater benefit in them. They attended fewer courses at Wayne State and more at out-of-state schools. They were less positive about the value of in-state postgraduate

". . . criterion physicians, doctors' doctors and . . . consultants . . . one might say they are the key to improving the educational picture in Michigan."

courses but more positive about the "typical" course.[4]

7. Criterion physicians spent more time in contact with other physicians and found more value in group discussions in the form of study groups or journal clubs.[5]

8. Criterion doctors made greater use of audio tapes and found substantially more value in them.[5]

9. Criterion physicians were less positive about the quality of education available in their hospital.[1]

10. Criterion physicians were less positive about the quality of education available in the state at large.[1]

11. Fewer criterion doctors were in solo practice. They reported fewer constraints upon attending programs from schedule conflicts but more from lack of time. Cost was less of a problem for them.[1, 7]

12. Criterion doctors were generally more receptive to suggestions for educational innovations.[7]

13. Criterion doctors were substantially younger than medical doctors at large. This would appear to explain some of the differences reported above, in particular their greater professional motivation.[1]

14. Most criterion doctors were specialists, but this was in part a result of the process used to nominate them.[1]

In summary, criterion doctors exhibited a strong sense of professional motivation; they also indicated considerable self-confidence. They appeared to be active seekers of continuing education, more national than local in their orientation.

A Final Comment

The picture of the Michigan physician that emerged from these data was of a hard-working professional, pressed by the lack of time, strongly motivated to keep abreast of developments in medicine but often disappointed that he was unable to do so.

The data led to a number of conclusions about continuing education techniques—the *how* of education. Periodical reading and attending professional meetings were highly valued methods of education. The traditional lecture was evaluated more positively than we had anticipated. More quality journals appear to be needed for the generalist; audio tapes, study groups, and journal clubs might profitably be used more extensively. One cannot assume that physicians are presently eager to adopt innovations involving new hardware, such as two-way radio or TV. The same can be said of clinical training programs of several weeks or months in length. The evidence indicates that innovations which can be implemented in the immediate work environment of the physician would be received quite favorably.

Even more significant than data regarding the *how* of education were findings concerning the *who*—whose educational needs might be met more adequately and who might increase their capability as educators. The data, in other words, turned our attention to certain groups which planners should concentrate on if the total flow of medical information throughout Michigan is to be facilitated.

The first of these groups is medical doctors in general practice. Older than others, aware of deficiencies, yet not as motivated to overcome them, they present a considerable challenge to continuing education planners. It is true that there are energetic groups of younger family practitioners who do not fit the statewide picture. What the present data tells us, however, is that there is a substantial proportion of general practitioners—larger, in fact, than might be imagined—which is not only elderly but also isolated from the mainstream of medical information in Michigan. Special effort is needed to recruit youth into the role of the family practitioner and to attract doctors already in it to greater educational activity.

The second group consists of doctors of osteopathy. Generally young, aware of deficiencies, and motivated to overcome them, they are a group which appears most eager to try new methods of education. The time appears to be right for concerted educational effort in their direction. Such effort should recognize the orientation of osteopaths as generalists interested in the problems of their local community.

The final group of interest is composed of criterion physicians, doctors' doctors and informal/formal consultants. Young, highly motivated, confident of their ability, already far advanced professionally, these physicians appear to be important not because more educational effort needs to be directed their way but because they have a great deal of potential as educators. Indeed, one might say they are the key to improving the educational picture in Michigan. They are in touch with the best sources of medical information and they are already serving in some capacity as on-the-spot educators of their colleagues. If their skills as educators can be significantly improved, and if they can turn more of their attention to the educational needs of the generalist, they will provide that unique resource that could lead to dramatic improvement in the quality of education at the point where most physicians want it—in their immediate environment.

References

1. Mann, F., Kotre, J., Reilly, A., and Vanselow, N. The Michigan Physician and His Continuing Education, *Michigan Medicine,* 1970, *69,* 21, pp. 981-990.
2. Mann, F., Kotre, J., Reilly, A., and Vanselow, N. The Michigan Physician: His Work Needs and Opportunities, *Michigan Medicine,* 1970, *69,* 23, pp. 1063-1069.
3. Kotre, J., Mann, F., Morris, W., and Vanselow, N. The Michigan Physician's Use and Evaluation of the Medical Journal, *Michigan Medicine,* 1971, *70,* 1, pp. 11-16.
4. Kotre, J., Mann, F., and Vanselow, N. The Michigan Physician: His Use and Evaluation of the Professional Meeting and the Postgraduate Course, *Michigan Medicine,* 1971, *70,* 4, pp. 111-117.
5. Kotre, J., Mann, F., and Vanselow, N. The Michigan Physician: His Education Through Face to Face Contacts and Technical Media, *Michigan Medicine,* 1971, *70,* 6, pp. 193-198.
6. Mann, F., Kotre, J., and Morris, W. The Michigan Physician: Perceptions of Competence, Worries, and Obsolescence, *Michigan Medicine,* 1971, *70,* 8, 301-37.
7. Kotre, J., Mann, F., and Vanselow, N. The Michigan Physician and Continuing Education: Looking to the Future, *Michigan Medicine,* 1971,

---

DRUG THERAPY PROBLEMS

By Robert M. Pearson, MS
Persis Mehta, PhD
Ann Arbor

Q. When transferring a patient from Keflin or Loridine to Keflex, what should the dose of the latter drug be? (D.G., Ann Arbor)

A. *The manufacturer suggests that for a patient receiving 6 Gm. of Keflin or 3 Gm. of Loridine daily, the dosage of Keflex should be between 0.5 to 1 Gm. four times a day. If the patient is receiving 1 to 2 Gm. of Keflin or 0.5 to 1.5 Gm. of Loridine a day, the dosage of Keflex may be in the range of 0.25 to 0.5 Gm. four times a day. Since the dosage will depend upon many variables such as the age and general condition of the patient and the severity of the infection, it will ultimately be determined by the physician's judgment.*

Q. A patient, previously maintained successfully on Coumadin, has been found to be unresponsive to the same dosage of the drug since the addition of Librium, Thorazine, Probanthine and Amesec to the therapeutic regimen. Is it conceivable that one or more of the other medications could be responsible for this effect? (D. Y., Ann Arbor)

A. *Amobarbital, a constituent of Amesec, is the agent most likely to reverse the effect of Coumadin (warfarin). Barbiturates have been implicated in antagonizing the action of warfarin by inducing increased synthesis of liver microsomal enzymes which augment the rate of metabolic degradation of the anticoagulant. The other drugs mentioned have not been reported to interfere significantly with anticoagulant therapy.*

Q. Which drug may be used as a substitute for promethazine hydrochloride (Phenergan) for pre-operative sedation? (S.F., Jackson)

A. *Propiomazine hydrochloride (Largon), which is structurally similar to promethazine, has a sedative effect which is additive to that of other central nervous system depressants. Following intravenous administration, the onset of action is about five minutes and the duration three to four hours. For pre-operative sedation, 20mg. may be given I.M. or I.V. with 50mg. of meperidine hydrochloride or the equivalent dose of another narcotic analgesic. No statistical difference was reported between the effects of promethazine and propiomazine when either drug was given in combination with meperidine in recommended doses to obstetrical patients.*

Q. What is the clinical use of glucagon as a cardiac agent? (D.H., Owosso)

A. *Glucagon exerts a positive inotropic and a modest chronotropic effect on the heart. It is presently being investigated in the treatment of cardiogenic shock, for treating digitalized patients who remain in a low output state, for treating myocardial depression secondary to beta-adrenergic blockade, and during the phase immediately after cardiac surgery associated with low output states and arrhythmias.*

Mr. Pearson is director and Doctor Mehta is associate project coordinator of the Michigan Regional Drug Information Center, University Hospital, Ann Arbor.

Perinatal Tips

By Paul M. Zavell, MD
Detroit

The following case from the files of the Wayne County Medical Society Perinatal Mortality Committee is presented as an aid in continuing education.

Maternal

This was the first pregnancy of this 31-year-old B+ white mother. Pregnancy had been uneventful except at 34 weeks bacteriuria was noted. However she had no symptoms and a urine culture was negative. At 35 weeks gestation she went suddenly into very active labor and delivered her female infant after only 2½ hours of labor. The mother's postpartum course was uneventful except for a 103° fever spike on the second day and pyelonephritis was suspected. A urine culture was normal. The mother was treated with antibiotics and did well thereafter.

Fetal

The 4 lb. 8 oz. female infant had an Apgar of nine at one minute and 10 at five minutes. Her initial physical examination was normal and she was started on oral feedings at six hours of age. The first two days of life were uneventful. However, on the morning of the third day the inf
was noted to be mildly icteric, lethargic, we
and obviously ill. Her temperature was 100° (F

The anterior fontanelle was flat, and respirat
rate was increased but the chest was clear
auscultation with good breath sounds bilateral
Excess mucus was noted in the pharynx but
vomiting occurred. The abdomen was soft with
masses but some periumbilical erythema
noted.

Because of the mother's spike in fever a
this finding on an obviously ill infant, sep
was suspected. Spinal tap and blood culture w
done after which I.V. glucose with saline and I.
penicillin, I.M. kanaycin (and later I.V. cephale
were given. Four hours later the upper abdom
was noted to be distended and venous distent
was present on the abdominal wall. The inf
appeared to be slightly more icteric with
abdomen tender while guarding was now pres
throughout. Bowel sounds were absent. C
X-ray was normal but abdominal films show
signs of obstruction. Two hours later at operat
widespread peritonitis with perforation of
ulcer of the lesser curvature of the stomach
found.

Perinatal Tips

Three hours after surgery the infant expi
Later the blood culture as well as the periton
fluid culture both grew out E. Coli.

Perinatal Committee Comments

1. Communication between the obstetrician
the pediatrician was good. Although the
fant did not survive here such communicat
remains essential to save lives in future sim
situations.
2. The course of this infant definitely sugges
sepsis. Among other diagnoses to be conside
are enterocolitis, portal vein thrombosis
fection) meningitis, perforated viscus.
3. The Committee commended the pediatric
for using good judgment and all the tools
hand in a valiant effort to save this inf

Doctor Zavell is chairman, Neo-Natal and Hospital Care Committee, Michigan Chapter, A.A.P.; and chairman, Perinatal Mortality Study Committee, Wayne County Medical Society.

Ocular complications

in the treatment of joint disease

By Conrad L. Giles, MD
Southfield

The ocular side effects of the therapy of joint disease are well known to the ophthalmologist and rheumatologist. The great majority of patients receiving these agents, however, are rarely followed by either of these specialists.

This publication will attempt to outline the significant ocular problems that can result during the routine use of these frequently employed agents and will suggest guidelines to aid in the prevention of significant ocular toxicity.

I. Salicylates

Sodium salicylate can cause temporary or partial blindness lasting up to 24 hours with a slow return to normal vision. This is probably due to a disturbance in the visual cortex.[1] Most salicylates in use today are given in the form of Aspirin (Acetyl salicylic acid). An Aspirin induced allergic dermatitis may have an associated keratitis and conjunctivitis. Discontinuing the Aspirin and treatment with local ophthalmic corticosteroids effects a cure in these rare cases.

II. Corticosteroids

Of all the groups of agents used in the therapy of the rheumatic diseases, the corticosteroids pose the most consistent threat of significant ocular side effects.[2]

Transient myopia and pupillary dilatation may occur during corticosteroid therapy but are little more than a passing annoyance to the patient. More significant, and yet far more subtle in presentation, is the occurrence of elevated intraocular pressure and posterior subcapsular cataracts. It is now firmly established that both the local and systemic administration of corticosteroids will elevate intraocular pressure in a large percentage of the normal population. While significant elevation of intraocular pressure occurs in over 30 percent of patients administering local 0.1 percent Dexamethasone (Decadron, MSD) for a period of four weeks, less data is available on the level of systemic corticosteroids required to induce a rise in intraocular pressure.[3] One large series[4] and several case reports, however, suggest that this is a widespread rather than an isolated phenomenon.

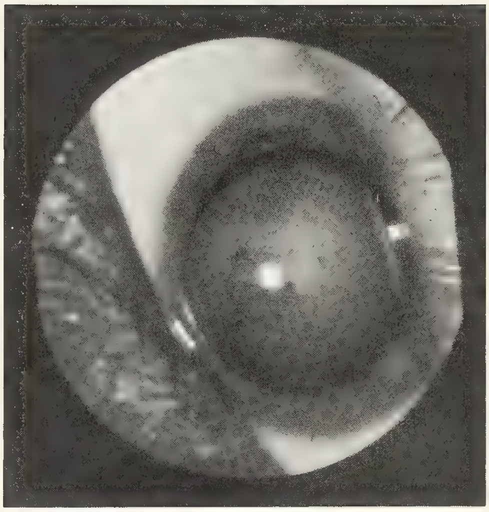


Fig. 1. Ophthalmoscopic view of posterior subcapsular cataract in patient who received high dosage, long duration corticosteroid therapy.

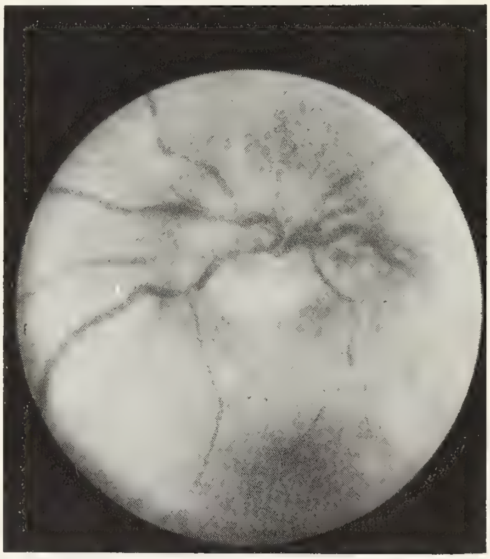


Fig. 2. Papilledema in eight-year-old patient receiving corticosteroids for the nephrotic syndrome.

Dose and duration of therapy appear to be the most significant determining factors in the production of posterior subcapsular cataracts (**Figure**

The author is affiliated with the Department of Ophthalmology, University of Michigan and Wayne State University Medical Schools; Harper, Sinai, and William Beaumont Hospitals.

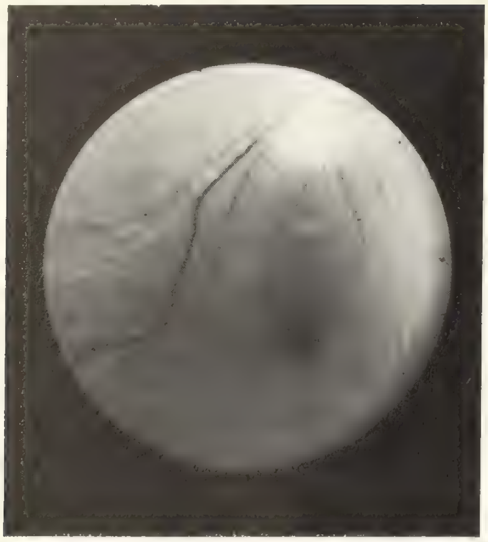


Fig. 3. A 43-year-old female with lupus erythematosis showing the characteristic "bulls-eye" lesion in chloroquine retinopathy.

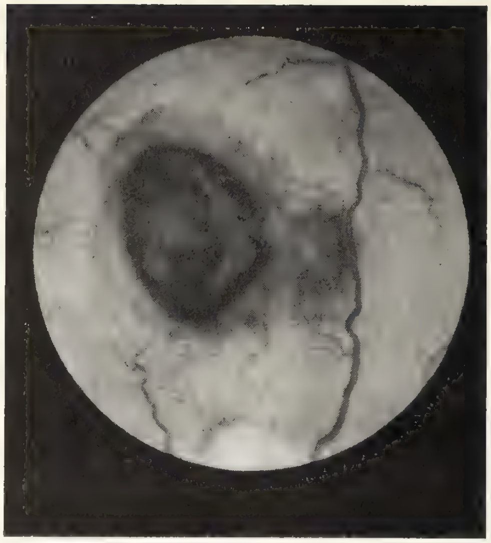


Fig. 4. Figures from the case report by Pinnas[10] showing the macular hemorrhage and a vision of 20/200.

1). Patients treated with greater than 15 mg. of Prednisone (or its equivalent) for a period of longer than 12 months develop definite cataracts nearly 90 percent of the time.[5] With lower dosages the incidence is significantly reduced; but when constant therapy is employed at any dosage level for more than four years, the incidence of cataract formation is greater than 50 percent.[5]

While neither of these side effects requires cessation of treatment, the clinician managing patients requiring corticosteroid therapy for control of their joint disease should advise that the patient be followed by an ophthalmologist during the period of therapy.

Papilledema associated with the pseudo-tumor syndrome (**Figure 2**) and potentiation of viral, bacterial, and fungal ocular infections are other significant ocular side effects which further emphasize the need for ophthalmic supervision of these patients.

III. Chloroquine

Hobbs' notation that many patients receiving chloroquine therapy exhibited a corneal lesion consisting of radiating white lines in the stroma[6] initiated a series of definitive papers both in England and this country which delineated the important and potentially blinding side effects of both chloroquine and hydroxychloroquine.

Chloroquine keratopathy is present in nearly 50 percent of patients receiving long-term treatment. The corneal deposition of the drug does not result in a significant or permanent decrease in vision. Cessation of the therapy reverses the corneal change.

The pigmentary retinopathy (**Figure 3**) and macular degeneration seen in far fewer patients is seldom reversible and frequently progressive often to total loss of central acuity. Obviously, prevention of pigmentary retinopathy in patients receiving either agent is the goal of the ophthalmologist.

Baseline studies should be obtained on all patients in whom treatment is contemplated; and when therapy is instituted, serial fields, color-vision analysis, vision, and ophthalmoscopic examinations must be evaluated every three months.[7]

IV. Butazolidin (Phenylbutazone)

Retinal hemorrhages have occurred in patients receiving butazolidin therapy. The mechanism for these hemorrhages, however is unclear. It is uncertain if this hemorrhage is on the basis of a toxic blood dyscrasia or the result of a direct action on retinal blood vessels.[1] In either situation therapy should be discontinued. Periodic ophthalmoscopic examinations by the generalist or internist is adequate surveillance for this group of patients.

V. Gold Therapy

The deposition of gold, so-called chryseosis, in the conjunctiva, cornea, and lens of patients receiving 2 gms. or more of gold in the treatment of rheumatoid arthritis is common. There is no interference with visual acuity or inflammation in conjunction with this deposit.

Gold therapy has also been associated with a severe conjunctivitis associated with a pseudomembrane.

The most significant ocular toxicity of gold involves the uveal tract and cornea. Patients will complain of photophobia; and on close examination a superficial, white corneal opacity near the limbus is seen. This can spread to involve the entire cornea with marked reduction in visual acuity. Its presence dictates the need for ophthalmic consultation, cessation of further gold therapy, and treatment of the cornea[8] with antibiotics.

VI. Indomethacin (Indocin)

Dilated pupils have been noted in patients who received indomethacin therapy. Of greater significance than the mydriasis is the rare occurrence of a toxic amblyopia.[9] Periodic examination of the visual acuity should be obtained in patients receiving this drug.

VII. Allopurinol (Zyloprim)

This xanthine oxidase inhibitor is increasingly being employed in the management of patients with gout. Two recent reports of macular problems associated with the agent suggest that these patients should be carefully followed by an ophthalmologist. Intra-retinal hemorrhage[10] and an exudative macular lesion[11] were found in two patients. Cessation of therapy in one patient resulted in an improvement of vision from 20/200 (**Figure** 4) to 20/60 (**Figure** 5) in six weeks, and in the other patient the vision rose to 20/20 from 20/60 in three months.

Until this drug has more widespread use (both in numbers and time) careful ophthalmologic monitoring is indicated.

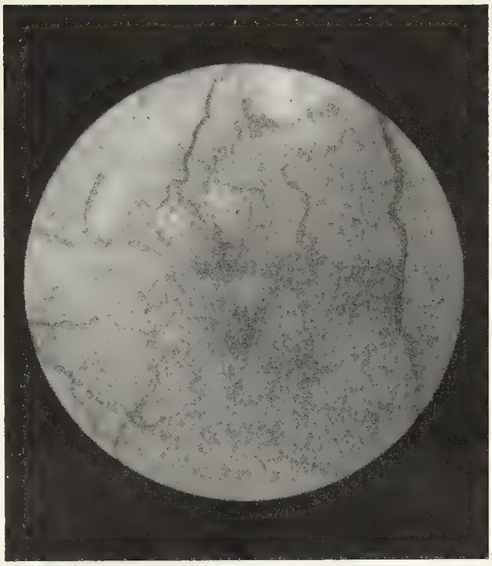


Fig. 5. Following cessation of therapy the retina appeared improved, and the vision was recorded as 20/60.

Discussion

The great majority of patients receiving therapy for the rheumatic diseases will not encounter significant ocular toxicity. Toxicity to the salicylates, aspirin, gold salts, and indocin present little difficulty in detection since the ocular side effects are clinically evident and the patient symptomatic. Chloroquine and hydroxychloroquine, butazolidin, allopurinol, and corticosteroid therapy involve more subtle symptoms; and by *their nature* the toxicity is, therefore, more threatening to the patient. In this group of treated patients deliberate and planned periodic ophthalmologic examinations are indicated.

A table is presented to outline the specific agent, its ocular toxicity, and a suggested plan for evaluation of these patients (table #1).

Summary

The ocular side effects of drugs used in the therapy of the rheumatic disease is outlined. A

Agent	Ocular Toxicity	Ophthalmic Exam Required
1. Salicylates	Toxic amblyopia	Notation of decreased vision.
1a. Aspirin	Conjunctivitis Keratitis	Photophobia with or without allergic dermatitis.
2. Corticosteroids	Glaucoma Cataract Mydriasis Papilledema	Baseline and every three months if on continued therapy.
3. Chloroquine Hydroxychloroquine	Keratopathy Retinopathy	Baseline and every three months.
4. Butazolidin	Retinal hemorrhage	Retinal evaluation by person administering drug.
5. Gold Therapy	Chryseosis Conjunctivitis Keratitis	Presence of ocular discharge or photophobia.
6. Indocin	Mydriasis Toxic amblyopia	Visual acuity every three months.
7. Allopurinol	Macular hemorrhage Macular exudate	Baseline and every three months.

suggested plan for the ocular evaluation of the patients receiving treatment is presented.

References

1. Grant, W. M.—Toxicology of the eye, 1962, Thomas. Springfield, Illinois.
2. Giles, C. L.—Ocular complications of steroid therapy, *Mich. Medicine* 66:298-301 (March) 1967.
3. Armaly, M. F.—Topical Dexamethasone and intraocular pressure. Glaucoma Symposium Tutzing, 1966, New York: Karger, Basel, 1967 pp. 73-96.
4. Bernstein, H. N. & Schwartz, B.—Effects of long-term systemic steroids on ocular pressure and tonographic values, *Arch. Ophthal.* 68:742 1962.
5. Giles, C. L., Mason, G. L., Duff, I. F., and McLean, J. A.—The association of cataract formation and systemic corticosteroid therapy, *JAMA* 182:719-722, 1962.
6. Hobbs, H. E. & Calnan, C. D.—The ocular complications of chloroquine therapy, *Lancet* 1:1207-1209, 1958.
7. Giles, C. L. & Henderson, J. W.—The ocular toxicity of chloroquine therapy, *Amer. J. Med. Sci.* 249: 230-235 (Feb.) 1965.
8. Rodenhauser, J. H. & Behrend, T.—Type and incidence of eye involvement after parenteral gold therapy, *Deutsch Med. Wschr.* 94:2389-2392 (Nov. 14) 1969.
9. Willetts, G. S.—Ocular side effects of drugs, *Brit. J. Ophthal.* 262, 1969.
10. Pinnas, G.—Possible association between macular lesions and allopurinol, *Arch. Ophthal.* 79:786 (June) 1968.
11. LaVal, J.—Allopurinol and macular lesions, *Arch. Ophthal.* 80:415 (Sept.) 1968.

Send requests for reprints to 20905 Greenfield, 407 Northland Medical Building, Southfield, 48075.

Monthly Surveillance Report

Cases of Certain Diseases Reported
To the Michigan Department of Public Health

For the Four-Week Period Ending April 30, 1971

MICHIGAN
DEPARTMENT
OF PUBLIC
HEALTH

	1971 This 4-Week Period	**1970 Same 4-Week Period**	**1971 Total To Above Date**	**1970 Total Same Date**	**Total Cases for 1970**
Rubella	477	498	1,379	1,671	3,012
Congenital Rubella Syndrome	1	0	2	0	2
Measles	390	264	765	555	1,834
Whooping Cough	6	6	32	38	195
Diphtheria	—	—	—	—	—
Mumps	1,481	768	6,337	2,794	7,825
Scarlet Fever & Strep Sore Throat	1,019	1,288	5,673	5,699	11,863
Tetanus	0	1	0	3	8
Poliomyelitis (paralytic)	0	0	0	0	2
Hepatitis	380	376	1,743	1,582	4,594
Salmonellosis (other than S. typhi)	54	50	207	179	665
Typhoid Fever (S. typhi)	1	3	2	5	14
Shigellosis	9	23	66	73	225
Aseptic Meningitis	10	0	39	17	296
Encephalitis	11	9	43	24	155
Meningococcic Meningitis	7	6	32	26	69
H. Influenza Meningitis	6	5	26	26	61
Tuberculosis	164	201	667	711	2,006
Syphilis	293	311	1,283	1,198	3,900
Gonorrhea	1,557	1,455	6,307	6,511	20,676

Information can be supplied by the local health department on the local incidence of disease.

Maurice Reizen, M.D., Director
Michigan Department of Public Health

The fantastic psychopathology of cancer patients

By C. E. Schorer, MD
Detroit

Abstract

Patients react to new anti-cancer drugs with surprising affective and cognitive disorders. The psychological reactions, illustrated with four cases, include denial, a reversal of feeling, and a fantasy of being saved miraculously, brought about in a state of exhaustion, toxicity, or sleep.

According to Reiser,[1] five possible relationships may exist between the psyche and neoplasia: first, none at all; second, somatopsychic (a simple reaction to the fact of having cancer); third; somatopsychic and facilitative (the reaction abets the growth); fourth, auxiliary psychogenic (the psychic factor abets but is not in itself primary); fifth, primary, etiologic psychogenic (to cigarettes and cyclamate add psyche). The present report, seen in that context, is essentially of the second, somatopsychic type, since I would like to describe the unusual reactions to cancer and cancer treatment in a series of patients seen for consultation on an oncology service.

Of great interest to me were several patients who demonstrated pathological disturbances of thought and feeling in reaction to new and generally unknown anti-cancer drugs. An example is a 20-year-old male with metastatic testicular choriocarcinoma who was given two separate injections of mithramycin,[2] an antibiotic thought to be especially effective against such tumors. He experienced within an hour, and lasting for several hours, intense rage, a wish to kill anyone, to throw a bedpan at a nurse who came in, to strike at the doctor who visited his bed, and felt that his "thoughts were in pieces." The drug was stopped, the mood passed, and when the drug was given again, the rage reaction returned. This time chlorpromazine was given and the drug was discontinued with a return of the patient to a normal mood. When I saw him, one day later, the mental status was normal (except for a mild hippie-like attitude to authority) and he had a vivid memory of the transient disturbance.

Another example was a 43-year-old mother with metastatic cancer of the gallbladder, receiving mitogillin,[3] an anti-cancer drug manufactured by the Michigan Department of Public Health. Upon receiving several days treatment she developed an expressive dysphasia: for instance, in trying to say that her son had just returned from the army, she said, "my daughter's come back from Lansing," followed by embarrassed shaking of the head and stammering until I found the correct words for her. She also showed mild tremor, a Bender test disturbance, and a marked suggestibility on sway testing. This disturbance cleared completely in two weeks after withdrawal of mitogillin, when she said, "What happened to me? I don't want that drug again."

The mechanism of these reactions in drugs that are still investigative is, of course, unknown. One might suspect that the cancer itself, either by cerebral metastasis, or by its well-known remote effects on the brain, is the cause. Against this is the recession of the psychopathology when the drug was withdrawn. Or one might argue from experimental evidence that the drug causes a breakdown product in the tumor which is the cause. Or one might consider this a generalized toxic effect of the drug on the entire organism. But the interest is heightened by the appearance of these symptoms, suggestive of focal effects of these drugs. In turn this lends interest because of the suggestion that some of these drugs may tell us about the physiology of certain brain functions, or point the way to new pharmacological agents for mental disorders.

A different group of reactions, which I term reactions of rescue, also came to my attention. A first case was a 42 year old deaf mute woman with metastatic carcinoma of the breast. At home, where nobody admitted to her that she had cancer, she would hit her head against the wall and refused to take any medicine. In the hospital, where I "conversed" with her in writing, she would parade up and down the corridors, arm in arm with her husband, heavily made up and lightly clad, gesturing and laughing; or she would appropriate flowers from the nursing station even though marked for another patient. This gay and giddy behavior bothered the nurses in contrast to the temperamental despair witnessed by the family.

A second case was a 70-year-old physician's widow with metastatic breast cancer. She had previously lost by cancer her husband, an aunt, and a daughter. When I saw her, in 1967, a few months after Detroit had become more painfully aware of racial trouble because of riots, she was referred because the nurse found her one morning to be "confused, muttering to herself." She explained that when she closed her eyes she could see again a vision which had occurred the preceding night in a "beautiful dream" that she had gone to heaven, with a colored nurse's aide, with

---

Doctor Schorer is associate professor, Wayne State University Department of Psychiatry and Lafayette Clinic.

whom she walked the white streets. This wishful vision, recurring in the daytime almost at will, confused and disturbed her.

A third case was a 58-year-old twice-widowed woman with metastatic carcinoma of the breast who was refusing both breast surgery and chemotherapy, and troubling the nurses by requests that people be prevented from walking by the door of her room and disturbing her. She explained that she had a miraculous experience recently—an angel, tall, and bearing a shield which he touched to her breast, bringing a thrill of instant relief, would descend from the ceiling when she closed her eyes. But from this relief she would be distracted by noise in the corridor.

A fourth case was a 50-year-old married man with amputation of the right lower extremity for a sarcoma which apparently had metastasized. He disturbed his wife and the nursing staff one morning when he described his dream of the night before as a reality—he was now cured, but the doctor had cancer; he himself had fallen heir to 69 million dollars, which he intended to donate to a foundation for the help of poor unfortunates like the doctor. When I saw him, one day later, he had modified the belief into a recognition that it was but a dream, and was intending to accept his physical and financial limitations by working hard at muscle training for use of crutches. Two days later, while putting in over-time in muscle training, he died abruptly of massive embolism to the lung.

These reactions of rescue did not demonstrate depression, which one would ordinarily expect in cancer cases. Instead they all demonstrated denial, and the vicissitudes of denial as a mechanism to maintain hope or turn away despair in the face of death and what dying means. Denial is somewhat difficult to define. The dictionary does not help—"unconscious denying a thought which is consciously intolerable"—because the word is used to define itself. I define it as the use of a negative, e.g., "I don't care lately if I get better," from the 70-year-old widow. It is distinguishable with difficulty from lying, which is admitting the truth to oneself but "kidding" other people; and it shades off into repression, which is omitting the statement altogether from one's repertory and awareness. In psychological studies of cancer patients, denial combined with repression is most frequently mentioned.[4] It is used to explain why almost half of cancer patients wait until it is too late before they go to a doctor.[5] In psychological tests denial explains why cancer patients show a lack of imaginativeness, a lack of feeling, and a high percentage of negative rejecting responses to test situations.[6]

More than denial operates in the cases I cited. An active reversal of feeling from despair to bliss was noted. This peculiar compensatory mechanism may begin as denial but overshoots into better-than-average ecstasy. Though delusions of grandiosity remind one of paranoid schizophrenia, the state of these patients resembled more the manic condition. A similar state was reported years ago in terminal patients by Schilder.[7]

Another aspect of the denial and reversal mechanism in these cases was that an active fantasy of rescue was being entertained. Hence, I have called these reactions of rescue. They remind one of the motives of the suicidal patient as described in 1959 by Petty and Jensen.[8] Behind each suicide attempt, as behind each cancer case cited, there may be a hope for miraculous salvation.

A fourth aspect of the denial mechanism is that it seemed to come about in a weakened ego state—while dreaming, in a trance-like condition, or weakened by the disease process or drug treatment. The suggestion is that in order for denial to go on to more flamboyant, practically psychotic delusions of bliss and rescue, the ordinary ego reality restraints had to be at least temporarily weakened, and with returning strength the delusion might be retained for shorter or longer periods of time depending on the further course of the patient.

These reactions of patients to cancer treatment, and to the experience of dying with cancer seem more and more important for us to appreciate in the years ahead. With increased longevity, more cancer cases will be occurring. With better supportive measures, more cancer patients will survive longer and have more of a chance to develop terminal psychological disturbances. With more and more new anti-cancer drugs, chances increase of new and weird psychopharmacological effects.

Doctors especially tend to shun cancer patients, and psychiatrists are no exception. Alexander's[9] experiment in Chicago showed that the analyst may succumb to the emotional strain of treating terminal patients with cancer. Psychiatrists need, in effect, to reckon with their own denial. Perhaps appreciation of the fantastic, "psychedelic" creativity of the cancer patient will intrigue psychiatrists to add their skill to the team devoted to helping people to die with dignity.

References

1. Reiser, M. "Retrospects and Prospects," *Am. N.Y. Acad. Sciences.* 125:1044, 1966.
2. Monto, R. W., et al. "Observations on the Mechanism of Hemorrhagic Toxicity in Mithromycin (NSC 24559) Therapy," *Cancer Research.* 29:697, 1969.
3. Olson, R. H., Hedeman, L. P., Anderson, G. R. "A Program for the Evaluation of Anti-cancer Agents in Dogs with Naturally Occurring Malignancies," *Animal Hospital.* 1:266-271, 1965.

New Placental Tissue Registry seeks support of MSMS members

By Joseph R. Cipparone, MD
Lansing

It is indeed unfortunate that only until recent times has the placenta finally begun to receive the attention it deserves. This complex, incomplete, endocrine organ, so vital in its function to the developing fetus, is a literal "reject"—discarded by the mother as the afterbirth, discarded by the obstetrician after a superficial examination and discarded by some pathologists after an equally superficial gross and microscopic examination.

In many instances when the complete examination of the placenta might have some prognostic significance relative to the infant, the placenta is not sent to the pathologist for an adequate examination. The absence of one umbilical artery in the cord, the development of chorioamnionitis in repeat pregnancies which may signal an incompetent cervical-os, and the tissue changes seen in latent toxemia are merely a few instances when proper study of this organ may give a clue to a birth defect (latent or overt) or signify better management of the mother in relation to future pregnancies. It is to the credit of dedicated workers such as Benirschke, Hertig, Driscoll, Blanc and numerous other authorities, that some of the mysteries of this organ are beginning to become unravelled.

The purpose of this paper is to request the support of the individual members of the Michigan State Medical Society for the newly formed Placental Tissue Registry, a division (subcommittee) of the Committee on Maternal and Perinatal Health of the Michigan State Medical Society. Approval for this continuing project has already been given by the following:

1) Chairman of the Department of Pathology at the Michigan State University College of Human Medicine (Dr. Cleon Morrill—October 21, 1969).

2) Committee on Maternal and Perinatal Health of the Michigan State Medical Society (March 25, 1970).

3) The Council of the Michigan State Medical Society (April 22, 1970).

4) Michigan Society of Pathologists (September 24, 1970).

5) Michigan Association of Osteopathic Physicians and Surgeons (January 18, 1971).

6) Michigan Osteopathic Society of Pathologists (January 18, 1971).

Letters have been sent to all of the chiefs of the departments of obstetrics and gynecology and pathology of the member hospitals of the Michigan Hospital Association asking for their support and cooperation in this program.

The data pertaining to the Placental Tissue Registry is as follows:

Purpose

The purpose of the Placental Tissue Registry is the acquisition of pathologic placental tissue specimens contributed from various sources in the State of Michigan and dissemination of the knowledge gained by a study of these specimens to those concerned with the care of the pregnant patient and her child.

Following evaluation of the specimens, reports will be returned to the contributors and all pertinent data will be placed in a permanent file in the Registry.

Site of the Registry

The Registry will be established in the Department of Pathology at the Michigan State University College of Human Medicine. Tissue specimens, microscopic sections, protocols and data accumulated by the Registry will be kept in the Pathology Department. Placental tissue specimens will be studied by the following members of the Faculty: Joseph R. Cipparone, MD, associate clinical professor of pathology (associate pathologist, St. Lawrence Hospital, Lansing); Charles H. Sander,

---

Doctor Cipparone is associate clinical professor of pathology, Michigan State University College of Human Medicine, and associate pathologist at St. Lawrence Hospital, Lansing.

CANCER PATIENTS/Continued

4. Bahnson, C. B., Bahnson, M. B. "Role of the Ego Defenses: Denial and Repression in the Etiology of the Malignant Neoplasm," *Am. N.Y. Acad. Sciences.* 125:827-845, 1966.
5. Titchener, J. L., Levine, M. *Surgery As a Human Experience.* New York: Oxford U. Press, 1960.
6. Bahnson, C. B., Bahnson, M.B. "Denial and Repression of Primitive Impulses and of Disturbing Emotions in Patients with Malignant Neoplasms," *Psychosomatic Aspects of Neoplastic Disease,* ed. Kissen, D. M., LeShan, L. L. London: Pitman Medical Publishing Co., 1964.
7. Schilder, P. "Uber Stellungnahmen Todeskranken," *Med. Klinik.* 23:480, 1927.
8. Jensen, V. W., Petty, T. A. "The Fantasy of Being Rescued in Suicide," *The Psychoanalytic Quarterly.* 27:327-339, 1958.
9. Renneker, R. E. "Countertransference Reactions to Cancer," *Psychosom. Med.* 19:409-418, 1957.

MD, assistant professor of pathology; James B. Thomas, PhD, associate professor (Department of Anatomy; Department of Human Development).

Finances for the Registry

Possible sources for financial assistance include:

1. Michigan Department of Public Health (Bureau of Maternal and Child Health). Funds have already been donated to the Registry for 1970-1971.
2. National Foundation of the March of Dimes.
3. Michigan State University College of Human Medicine (Department of Pathology—fund allocation).

Processing of Placental Tissue Specimens

1. Any physician in the State of Michigan may submit a placental tissue specimen to the registry. It is preferred, however, that specimens be submitted in association with certain pregnancy problems and conditions described below.

A portion or all of the placentas from fetuses associated with any of the following pregnancy problems:

1. Unexplained stillbirths
2. Dysmaturity
3. Toxemia of pregnancy
4. Glomerulonephritis
5. Essential hypertension
6. Postmaturity
7. Diabetes mellitus
8. Infectious diseases of the mother
   (e.g., tuberculosis, syphilis, etc.)
9. Erythroblastosis fetalis
10. Twinning or multiple births
11. Abruptio placentae
12. Anomalous placentas
13. Anomalous cords
    (e.g., absence of one umbilical artery)
14. Congential abnormalities of the fetus
15. Amnionitis
16. Trophoblastic disease

2. Gross specimens (complete placenta or a portion of it) fixed in formalin can be sent by the clinician directly to the Registry. If he prefers to have the specimen processed in the pathology department of his own institution he can request the pathologist to send the gross specimen, tissue segments and/or representative microscopic sections for inclusion in the registry.

3. The attending physician should complete the Placenta Study Sheet on which obstetric information may be transmitted to the Registry (see below) (Modified from: Gruenwald, P.: Examination of the Placenta by the Pathologist, *Archives of Pathology* 77: 41-46, 1964). This information is vital if the gross and microscopic features of a placenta are to be interpreted meaningfully. The study sheet should accompany the specimen.

4. Upon completion of the study of the specimen which includes a complete study of the gross and microscopic features as outlined by Benirschke (Benirschke, K.: Examination of the Placenta, *Obstetrics and Gynecology*, 18:309-333, 1961), a summarized report will be sent to the attending physician and/or pathologist. A copy of the report will be kept on file at the Registry.

5. As the purpose of the Placental Tissue Registry is to advance medical knowledge there will be no charge to the attending physician or patient for the above service nor will the registry pay a fee to the attending physician or pathologist submitting a placental tissue specimen.

Method of Sending Specimen to Registry

1. If the entire placenta and cord are being sent for study it is best to fix them in an ample amount of formalin for several days.

2. The specimen can then be placed in a plastic bag which is properly labelled (patient's name) in a "dry" state (drain off the formalin) and shipped in a suitable container such as a cardboard box. Contributors to the registry to date have sent specimens in the above manner and we have encountered no difficulties. Some contributors have sent two or three placentas (each in their own plastic bag) in one container in this manner.

3. The placenta study sheet with the summarized clinical data should accompany the specimen. This should be filled out by the attending physician or house staff physician. A supply of these forms can be sent to you by requesting them from the Placental Tissue Registry, Department of Pathology, Michigan State University College of Human Medicine, East Lansing, Michigan 48823.

Work sheets are to be used by the Registry in evaluation of each specimen. Contributors will receive a summary report of the gross and microscopic findings based on the cumulative data reported in the work sheets. Numerical designations have been given to the observed data with the potential computerization of this data for research studies.

The Maternal Tissue Registry (established in 1956) has been a very worthwhile endeavor with the work being done in the Department of Pathology at the University of Michigan under the direction of Dr. James French. It is hoped that this continuing project of a Placental Tissue Registry will contribute knowledge that will be helpful in the understanding of perinatal problems. Your support and cooperation will make the project worthwhile.

Recurrent postpericardiotomy syndrome

Its protracted nature and association with atrial septal defects

By Gerald C. Timmis, MD
Seymour Gordon, MD
Renato G. Ramos, MD
All of Royal Oak

Abstract

Five cases of postpericardiotomy syndrome are reported. All were characterized by a recurrent and markedly protracted nature. Two cases remained symptomatic more than a year after surgery. The syndrome in all five cases complicated the repair of a secundum artrial septal defect. The majority of reported recurrent postcardiotomy syndromes have complicated repair of this lesion. An auto-immune reaction is the probable underlying mechanism. There is uniform response to steroids when this drug is needed to control the symptoms.

Introduction

Since it was first reported as a complication of mitral commissurotomy, the postpericardiotomy syndrome has been repeatedly observed in patients following various forms of surgery involving manipulation of the pericardium.[1-11] It is also known to complicate penetrating and nonpenetrating chest wounds.[12-14] Its clinical importance has not been emphasized since it is generally benign and transient. Exceptionally, chronic recurrent episodes have dominated the postoperative course of patients undergoing cardiac surgery. It is the purpose of this paper to report five cases which emphasize the more malignant potential of the postpericardiotomy syndrome, its recurrent and protracted nature, and its association, at least in our experience, with the correction of atrial septal defects.

Case Reports

Case I. On October 26, 1967, a 47-year-old, white female had a secundum-type atrial septal defect closed by direct apposition through a right atriotomy utilizing extracorporeal circulation (Sarnes Pump with a disposable bubble-bag oxygenator). Nineteen days after surgery, the patient experienced an episode of transient right anterior thoracic pleuritic pain. A chest X-ray revealed a small right pleural effusion. Two days later when the patient had become increasingly dyspneic, bilateral pleural effusions with increasing fluid accumulation on the right were discovered. A right thoracentesis four days later yielded 750 cc. of clear amber fluid. The patient responded to salicylates and was discharged on November 25, 1967, her 30th hospital day.

Five days later, she was readmitted to another hospital with recurrent fever, right-sided chest pain and orthopnea. Her temperature was 102°. Blood pressure was 130/90. Physical findings were consistent with a right pleural effusion: dullness, decreased tactile fremitus and whispered pectoriloquy with decreased breath sounds were noted at the right base. The white blood cell count was 12,000 with a 5% nonfilamented neutrophils, 69% polymorphonuclear neutrophils, 18% lymphocytes, 6% monocytes and 2% eosinophils. Her C-reactive protein was positive. A sedimentation rate was, however, only 10 mm per hour. Blood cultures were negative. A right thoracentesis yielded 800 cc. of clear amber fluid. Her treatment thereafter included aspirin, Demerol and Chloromycetin which were maintained for one week, when the patient was discharged.

On March 2, 1968, over four months after surgery, she was again seen because of fever and right pleuritic chest pain of four days duration. There was no evidence at this examination of pleural or pericardial effusion, or heart failure. She was therefore treated with Indomethacin ('Indocin') with prompt remission of symptoms.

Case II: L. B., a 17-year-old, white female had a secundum-type atrial septal defect closed utilizing a Teflon patch on March 10, 1967 (Sarnes Pump with a disposable bubble-bag oxygenator). On the seventh postoperative day after having become afebrile and free of discomfort, she developed a right posterior pleuritic pain and on the following day, an audible pleural rub. At this time, a discreet pericardial friction rub was also noted. The patient promptly became asymptomatic on treatment with aspirin with resolution of abnormal physical findings.

She remained asymptomatic until right pleuritic pain and fever recurred on July 26, 1967, four months after surgery. She was successfully managed with aspirin as an outpatient with prompt relief of symptoms. Six weeks later she was readmitted because of a low grade temperature associated with severe bilateral anterior pleuritic

---

Doctor Timmis and Doctor Gordon are co-chairmen of the Division of Cardiology at William Beaumont Hospital, Royal Oak. Doctor Ramos is associated with the division.

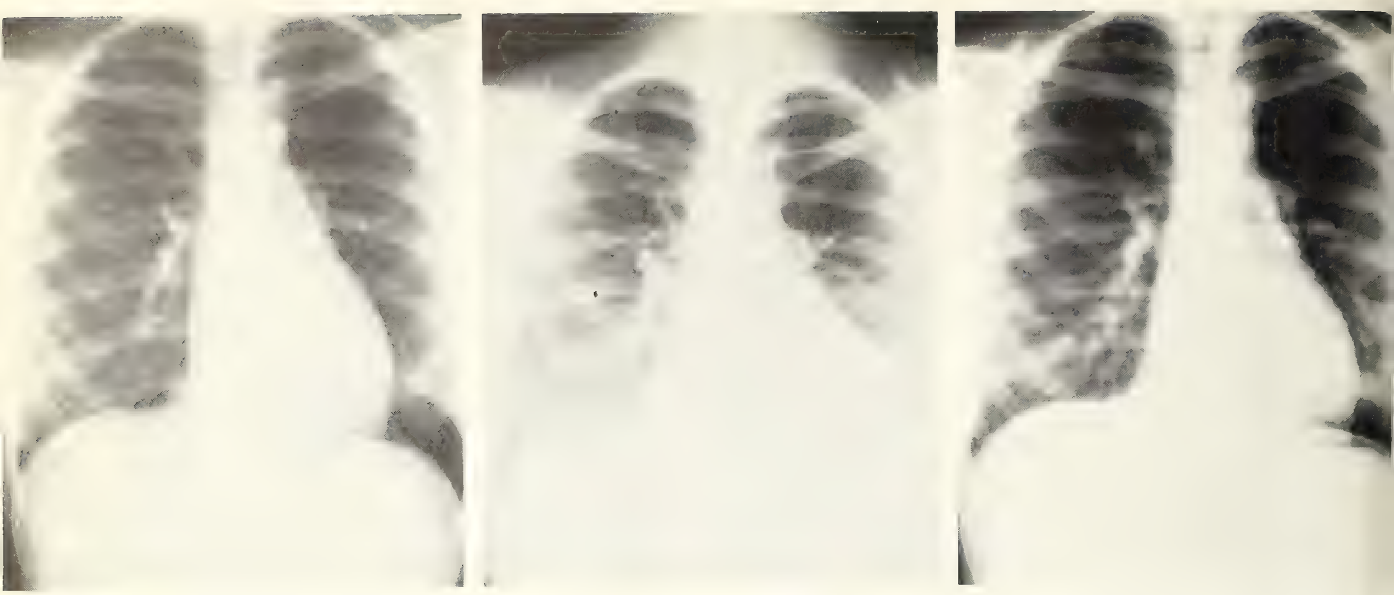


Figure I. Case II. Serial postoperative X-rays revealing development and resolution of cardiomegaly (effusion) parallelling recurrent postpericardiotomy syndrome six months postoperatively (See text).

chest pain which radiated to the left shoulder, neck and jaw. Temperature was 100.4°. A pericardial friction rub was again audible. Her white blood cell count was 9,600 with 18% nonfilamented neutrophils, 52% polymorphonuclear neutrophils, 22% lymphocytes, 5% monocytes, 1% eosinophils and 2% basophils. The sedimentation rate method was 47 mm per hour. Blood cultures were negative. A chest X-ray revealed a distinct increase in heart size (**Figure I**). The patient was unresponsive to aspirin but promptly defervesced and became asymptomatic on Dexamethasone. Minor recurrences of pleuritic pain after discharge necessitated maintenance salicylates. Although heart size became and remained normal, an electrocardiogram in December still revealed changes consistent with subepicardial injury (**Figure II**).

On March 5, 1968, she was again admitted because of recurrent bilateral anterior pleuritic pain and fever. There was no pleural or pericardial rub. Roentgenographic and laboratory examinations were unremarkable. The patient responded promptly to Indomethacin. Following discharge (over one year after surgery), the patient had three further episodes of recurrent pleuritic pain and fever necessitating maintenance Dexamethasone during this period.

Case III: A. P., a 33-year-old, white male was subjected to surgical closure of his secundum-type atrial septal defect on April 22, 1965. The postoperative course was complicated by a spiking temperature and diarrhea which was controlled with antibiotic therapy. On the ninth postoperative day, the patient was discovered to have an elevated venous pressure with a paradoxical pulse, ascitic fluid accumulation and fever. In conjunction with the maintenance antibiotic therapy, Prednisone was started. The patient promptly defervesced and became asymptomatic. He was discharged on the twentieth postoperative day. Steroid therapy was discontinued on May 23, 1965, eleven days after discharge.

Two weeks later, June 7, 1965, the patient was readmitted with a temperature of 102°, bilateral anterior and parasternal chest and back pains. A pericardial friction was audible. The white blood count was 5,833 with 54% neutrophils and 46% lymphocytes. Blood cultures were negative. Prednisone was restarted with prompt remission of symptoms and the patient was discharged one week after admission.

Over the next eighteen months the patient had four episodes of recurrent, rather severe pleuritic pain and fever all of which were promptly responsive to intermittent steroid therapy.

Case IV: M. D., a white female had a secundum-type atrial septal defect repaired on March 18, 1969 at the age of 36 because of a one year history of progressively severe dyspnea on exertion. In the immediate postoperative course the patient developed left chest, sternal and inframammary pain which was pleuritic in nature and associated with a low grade temperature. It lasted for several days and was responsive to salicylates. For two months after surgery the patient was asymptomatic and doing well. Her defect appeared to be well corrected. Several times over the next six months, however, the patient developed rather fleeting parasternal and inframammary pain radiating into the left axilla which was also pleuritic in type but uncomplicated by fever and usually promptly responsive to salicylates.

On November 7, 1969, recurrent pleuritic pain involving the left posterobasal axillary areas developed. This radiated to the left trapezial ridge and was rather severe in intensity. It was again responsive to salicylates. There was no physical or roentgen evidence of cardiac enlargement or pericardial fluid accumulation. The electrocardiograms revealed residual anterolateral changes consistent with subendocardial injury and a residual incomplete right bundle branch block pattern. Thereafter, the patient has remained asymptomatic.

Case V. T. W., a 63-year-old, white female had a primary closure of a secundum atrial septal defect on December 2, 1969. Postoperatively the patient spontaneously reverted to normal sinus rhythm having been chronically in atrial fibrillation preoperatively. Her postoperative course was complicated by an episode of left precordial and parasternal pain which in conjunction with a temperature was diagnosed as postcardiotomy syndrome.

Re-examination on January 23, 1970 revealed that the patient had a residual left basal systolic ejection murmur and diastolic flow murmur audible between the lower sternal border and apex consistent with a residual left to right shunt at the atrial level. On February 20, 1970, the patient received two units of whole blood because of residual anemia. Intramuscular iron therapy ('Imferon') was also given. Following correction of her anemia, the ausculatory findings of a residual left to right shunt persisted. At that time and on three occasions over the next month and a half the patient bitterly complained of recurrent pleuritic pain in the locations mentioned above which were marginally responsive to salicylates and 'Indocin' (25 mg qid). Serial X-rays revealed progressive reduction in heart size and no evidence of pericardial fluid accumulation. The patient is being maintained on supportive salicylate therapy as necessary. Otherwise, her convalescence has been satisfactory.

Discussion

When it was originally described in connection with the surgical correction of mitral stenosis Soloff and others after him assumed the postcardiotomy syndrome represented reactivation of rheumatic fever.[1-3] Subsequently, Ito and Engle reported a syndrome complicating the surgical correction of congenital heart disease similar to the symptom complex originally described by Soloff.[4] Since then this complication following various forms of surgery and trauma involving the pericardium has been referred to as the "postpericardiotomy" or "postcardiotomy syndrome."[4-14]

After failure to validate reactivation of the rheumatic process and following the observation of the syndrome complicating a stab wound of the heart, hemopericardium was suspected as its origin. In 1960, Kaplan demonstrated a reaction between homologous heart tissue and factors in the serum of patients who had undergone mitral valvulotomy.[15] This observation and the discovery of antiheart antibodies by Robinson and Brigden in 5 of 6 patients with the postcardiotomy syndrome suggested hypersensitivity as the basis for this syndrome.[16] Tissue destruction incident to surgery may result in the production of antibodies with the ultimate appearance of a symptomatic autoimmune reaction. The failure to implicate micro-organisms and the latent period preceding the reaction support this theory. It has since been shown, utilizing the immunofluoroscent technique as well as the antibody consumption test, that most patients who develop this syndrome have detectable antiheart antibodies in this sera.[17]

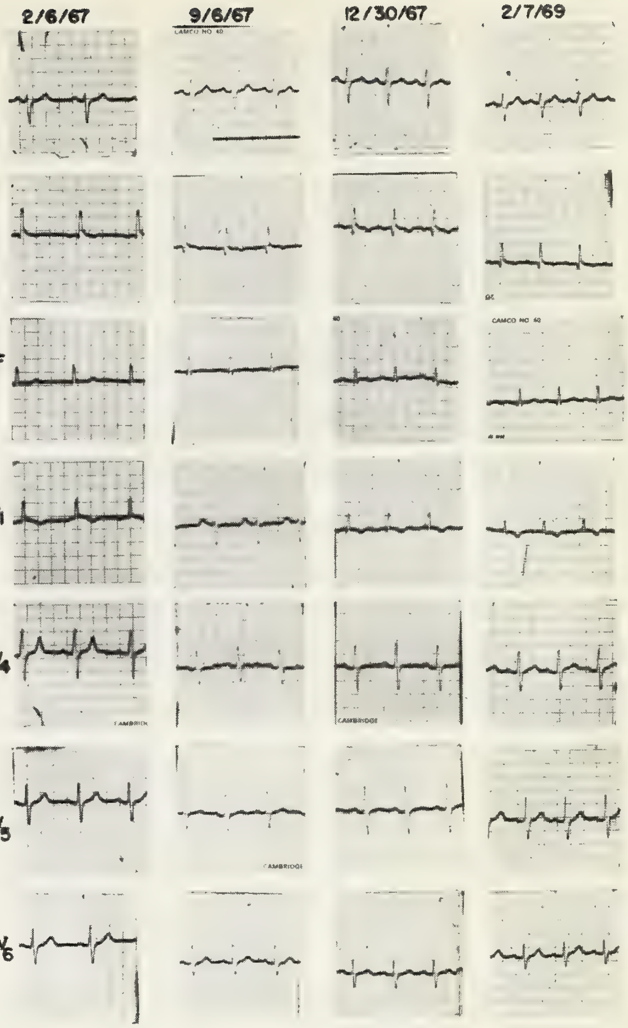


Figure II. Case II. Residual electrocardiographic changes consistent with anterior and adjacent inferior subepicardial injury nine months after closure of atrial septal defect (12-30-67).

While the similarity between the postcardiotomy syndrome and benign idiopathic pericarditis is striking, epidemiologic, bacteriologic and biologic studies in the former have been consistently negative.[18] It is comparable, clinically and immunologically, with the postmyocardial infarction syndrome described by Dressler, further attesting to the antigenic potential of injured myocardium.[19-20] Bed rest, analgesic and antiphlogistic agents usually control the fever and chest pain which are the most common manifestations of this syndrome. The necessity for steroid therapy is exceptional. Neither thoracentesis nor pericardiocentesis is often required although fluid accumulation in both the pericardial and pleural spaces is common.

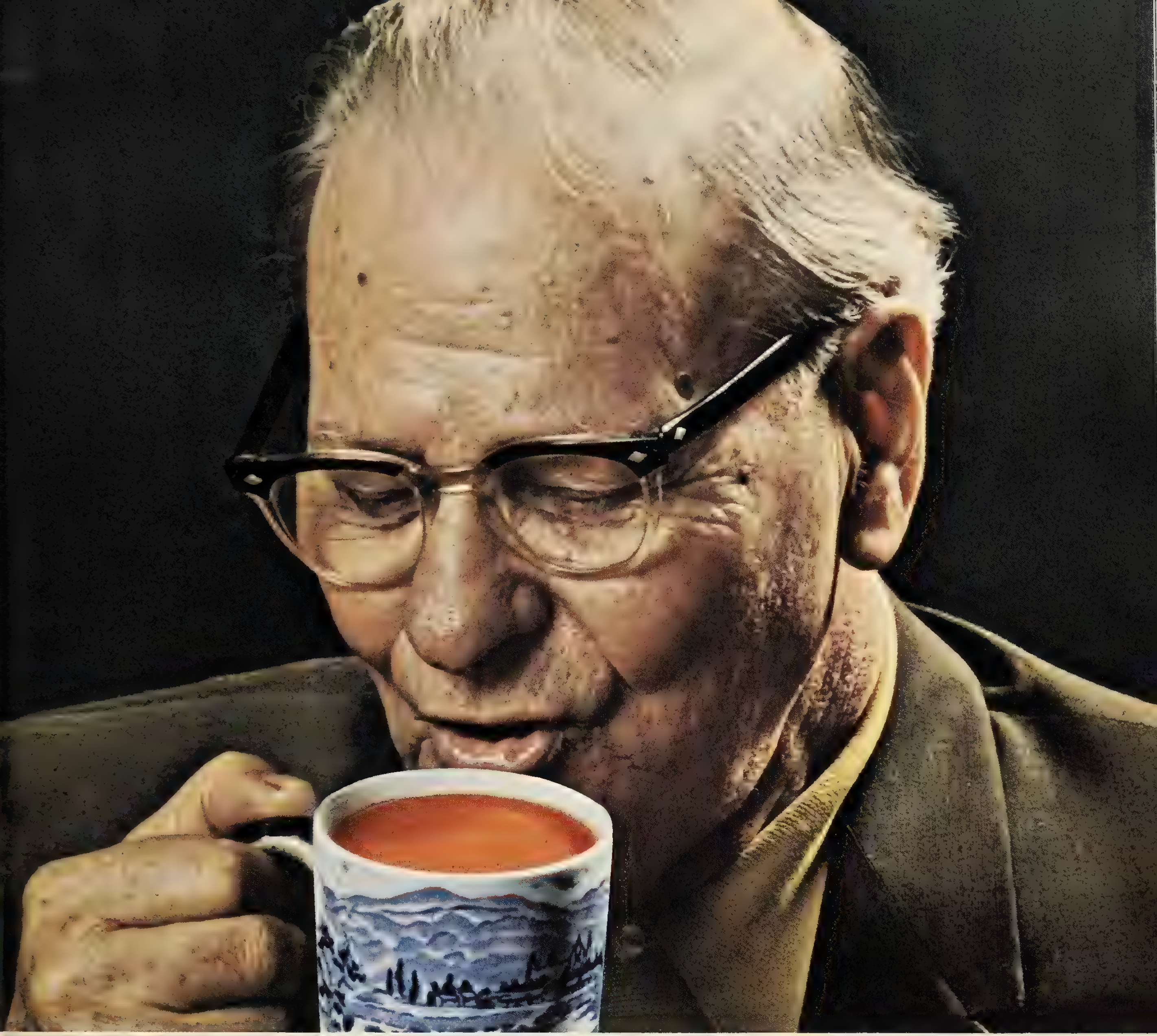
Characteristically, the syndrome appears after a latent period of 10 to 14 days and is transient in its duration, rarely lasting more than two weeks. With increasing frequency, recurrences have been reported. However, most occur within two months following the initial attack. Occasionally, recurrences may be protracted over a period of months as described in this report.

Contrary to expectations, the frequency of postpericardiotomy syndrome is apparently no greater following surgery for rheumatic heart disease than other forms of cardiac involvement.[7] The same is true of *recurrences*. While no particular type of lesion appears to have a predilection for recurrences, those that have been reported were most commonly associated with atrial septal defects.[11] Swan reported fifteen cases of the "postcardiac surgery syndrome" in a series of one hundred operated cases of atrial septal defect.[5] In six other patients it occurred in a clinically milder form. It has recently been suggested that there may be an unusually high relationship of pericardial disease associated with defects in the atrial septum.[21] Just, et al, contend that there may be an etiologic relationship suggesting that right atrial enlargement and chronic elevation of right atrial pressures may "play an important, yet ill-defined role in the genesis of pericardial effusion." They further observed a frequent association of mitral and/or tricuspid incompetence or stenosis in relationship to atrial septal defects complicated by pericardial disease. One case in this series has severe residual mitral insufficiency which was demonstrated preoperatively (Case I).

In conclusion, while recurrences of the postcardiotomy syndrome have been reported, their repetitious and protracted nature has not been emphasized. Furthermore, when *repeated recurrences* complicate the postoperative course, there is a likelihood that they are associated with the repair of atrial septal defects.

References

1. Soloff, L.A., Zatuchni, J., Janton, O.H., O'Neil, T.J., and Glover, R.P. Reactivation of Rheumatic Fever Following Mitral Commissurotomy. Circulation 8: 481, 1953.
2. Dresdale, D.T., Ripstein, C.B., Guzman, S.V., and Greene, M.A. Postcardiotomy Syndrome In Patients With Rheumatic Heart Disease. Cortisone As A Prophylactic and Therapeutic Agent. Amer. J. Med. 21: 57, July, 1956.
3. Larson, D.L. Relation of the Postcommissurotomy Syndrome to the Rheumatic State. Circulation 15: 203, 1957.
4. Ito, T., Engle, M.E. and Goldberg, H.P. Postcardiotomy Syndrome Following Surgery For Nonrheumatic Heart Disease. Circulation 17: 549, 1958.
5. Swan, M., Kortz, A.B., Davies, D.H. and Blount Jr., S.G. Atrial Septal Defect, Secundum. An Analysis of One Hundred Patients Undergoing Open Surgical Repair. J. Thorac. Surg. 37: 52, 1959.
6. Johnson, J.L. Postpericardiotomy Syndrome in Congenital Heart Deformities. Amer. Heart J. 57: 543, 1959.
7. Goodkind, M.J., Boomer, W.E., and Goodyer, A.V.N. Recurrent Pericardial Effusion After Nonpenetrating Chest Trauma. Report of Two Cases Treated With Adrenocortical Steroids. New Eng. J. of Med. 263: 874, 1960.
8. Engle, M.E., and Ito, T. Postpericardiotomy Syndrome. Amer. J. Cardiol. 7: 73, 1961.
9. Tabotznik, B., and Isaccs, J.P. Postpericardiotomy Syndrome Following Traumatic Hemopericardium. Amer. J. Cardiol. 7: 83, 1961.
10. Smith, W.G. Postcardiotomy Syndrome, Anticoagulants and Hemopericardium. Lancet 280: 750, 1961.
11. Kropp, I., Oshrain, C., and Carno, I. Recurrent Pleuropericarditis (Postcardiotomy Syndrome) After Open Heart Repair of Congenital Cardiac Defects. (Abstract) Circulation 24: 976, 1961.
12. McGuinness, J.B. and Taussig, H.P. The Postpericardiotomy Syndrome. Its Relationship To Ambulation in the Presence of "Benign" Pericardial and Pleural Reaction. Circulation 26: 500, 1962.
13. Uricchio, J.F. The Postcommissurotomy (Postpericardiotomy) Syndrome. Amer. J. Cardiol. 12: 436, 1963.
14. Zeft, J.H., and McIntosh, H.D. Postpericardiotomy Syndrome In a Patient With a Retained Foreign Body. Amer. J. Cardiol. 16: 593, 1965.
15. Kaplan, M.H. The Concept of Autoantibodies in Rheumatic Fever and in the Postcommissurotomy State. Ann. N.Y. Accs. Sci. 86: 974, 1960.
16. Robinson, J., and Brigden, W. Immunologic Studies in the Postcardiotomy Syndrome. Brit. Med. J. 2: 706, 1963.
17. Van Der Geld, H. Antiheart Antibodies in the Postpericardiotomy and the Postmyocardial Infarction Syndrome. Lancet 2: 617, 1964.
18. Drusin, L.M., Engle, M.A., Hagstrom, J.W.C., and Schwartz, M.S. The Postpericardiotomy Syndrome: A Six Year Epidemiologic Study. New Eng. J. Med. 273: 597, 1965.
19. Dressler, W. The Postmyocardial Infarction Syndrome. JAMA 160: 1379, 1956.
20. Dressler, W. The Postmyocardial Infarction Syndrome—A Report of Forty-Four Cases. Arch. Int. Med. 103: 28, 1959.
21. Just, H., and Mattingly, T. W. Interatrial Septal Defects and Pericardial Disease. Coincidence or Casual Relationship? Am. Heart J. 76: 157, 1968.



Campbell's Soups... wide variety...for limited appetites

Many people lose interest in food as they grow older. Some of them are fussy eaters—with only a few favorite foods. Others become indifferent to foods—because planning and preparing meals becomes a chore. Here Campbell's Soups can help—for these four very good reasons:

Appeal With a variety of tastes, textures, aromas, and colors, Campbell's Soups can add interest and appetite appeal. And they're easy to eat—ingredients are tender, bite-size. Even patients on special diets will find soups they can enjoy among the more than 50 different varieties available.

Nourishment Campbell's Soups contain selected meats and sea foods, best garden vegetables—carefully processed to help retain their natural flavors and nutritive values.

Convenience Within 4 minutes a bowl of delicious soup is heated and ready to eat.

Economy Campbell's Soups are inexpensive—an important consideration to those whose budgets are limited.

Recommend Campbell's Soups . . . and, of course, enjoy them yourself. Remember, *there's a soup for almost every patient and diet . . . and for every meal.*

Campbell's
CONDENSED
SOUP

You Can't Blame a Girl...

(when her
husband's
at fault)

Flagyl® brand of metronidazole

Cures Trichomoniasis in Both Women and Men

About half of all husbands of infected women harbor *Trichomonas vaginalis.**

Few of these men have symptoms. Even so, all are capable of perpetuating the infection and rendering treatment of a woman alone futile.

Only a systemically active medication like Flagyl is capable of reaching the hidden reservoirs of infection in the genitourinary tracts of both men and women.

Only Flagyl has been able to achieve rates of cure consistently above 90 per cent and often up to 100 per cent in trichomonal infections in both men and women.

Indications: For the treatment of trichomoniasis in both male and female patients and the sexual partners of patients with a recurrence of the infection provided trichomonads have been demonstrated by wet smear or culture.

Contraindications: Evidence of or a history of blood dyscrasia, active organic disease of the central nervous system and the first trimester of pregnancy.

Warnings: Use with discretion during the second and third trimesters of pregnancy and restrict to patients not cured by topical measures. Flagyl (metronidazole) is secreted in the breast milk of nursing mothers. It is not known whether this can be injurious to the newborn.

Precautions: Mild leukopenia has been reported during Flagyl use; total and differential leukocyte counts are recommended before and after treatment with the drug, especially if a second course is necessary. Avoid alcoholic beverages during Flagyl therapy because abdominal cramps, vomiting and flushing may occur. Discontinue Flagyl promptly if abnormal neurologic signs occur. There is no accepted proof that Flagyl is effective against other organisms and it should not be used in the treatment of other conditions. Exacerbation of moniliasis may occur.

Adverse Reactions: Nausea, headache, anorexia, vomiting, diarrhea, epigastric distress, abdominal cramping, constipation, a metallic, sharp and unpleasant taste, furry or sore tongue, glossitis and stomatitis possibly associated with a sudden overgrowth of *Monilia,* exacerbation of vaginal moniliasis, an occasional reversible moderate leukopenia, dizziness, vertigo, drowsiness, incoordination and ataxia, numbness or paresthesia of an extremity, fleeting joint pains, confusion, irritability, depression, insomnia, mild erythematous eruptions, "weakness," urticaria, flushing, dryness of the mouth, vagina or vulva, vaginal burning, pruritus, dysuria, cystitis, a sense of pelvic pressure, dyspareunia, fever, polyuria, incontinence, decrease of libido, nasal congestion, proctitis, pyuria and darkened urine have occurred in patients receiving the drug. Patients receiving Flagyl may experience abdominal distress, nausea, vomiting or headache if alcoholic beverages are consumed. The taste of alcoholic beverages may also be modified.

Dosage and Administration: *In the Female.* One 250-mg. tablet orally three times daily for ten days. Courses may be repeated if required in especially stubborn cases; in such patients an interval of four to six weeks between courses and total and differential leukocyte counts before, during and after treatment are recommended. Vaginal inserts of 500 mg. are available for use, particularly in stubborn cases. *When the vaginal inserts are used* one 500-mg. insert is placed high in the vaginal vault each day for ten days and the oral dosage is reduced to two 250-mg. tablets daily during the ten-day course of treatment. Do not use the vaginal inserts as the sole form of therapy. *In the Male.* Prescribe Flagyl only when trichomonads are demonstrated in the urogenital tract, one 250-mg. tablet two times daily for ten days. Flagyl should be taken by both partners over the same ten-day period when it is prescribed for the male in conjunction with the treatment of his female partner.

Dosage Forms: Oral tablets . . . 250 mg.
Vaginal inserts . . 500 mg.

*References available on request.

SEARLE
P. O. Box 5110
Chicago, Illinois 60680

942

Research in the Service of Medicine

sterile solution (300 mg. per ml.)

Consider Lincocin®

(lincomycin hydrochloride, Upjohn)

NDC 9165-2
No. 8048
20cc. Vial Sterile Solution
Lincocin®
(lincomycin hydrochloride injection)
Equiv. to 300 mg. per cc. lincomycin
Upjohn
3 Gm. per 10 cc.
Caution: Federal law prohibits dispensing without prescription.
EXPIRES→
2cc. Sterile Solution No. 8055
Lincocin®
(lincomycin hydrochloride injection)

For your convenience
in 2 ml. and 10 ml. vials…

and single-dose 2 n
disposable syringe

Upjohn THE UPJOHN COMPANY
KALAMAZOO, MICHIGAN

©1970 by The Upjohn Company JA70-6835 MED B-4-S (KZL-9)

Five MSMS Councilors, four on the Legislative Policy Committee and the Chairman of the Legal Affairs Committee, conferred at length with Governor Milliken Wednesday, April 28. The Governor expressed sympathy for the physicians' appeal for stabilizing the fiscal aspects of Medicaid, and cited the state's financial crisis resulting from sharply reduced income and additional expenditures in 1970 as the root cause for 1971 disruptions in Medicaid payments. State's money shortage will continue into fiscal 1971-72 (beginning July 1, 1971), and doctors were urged to work hard for adequate appropriations for continuous Medicaid services. The Governor also concurred with the doctors that adjustments in provider fees to reflect current consumer price indexes are needed, but said that is a federal prerogative. Other agenda items included 1) Need for more medical manpower, medical educational facilities, and interest in developing the Physician Assistant concept; 2) Pending Legislative study of malpractice actions and professional liability; 3) Leadership for the state comprehensive health planning office; and 4) Chiropractic encroachment. Left to right at the conference are Robert C. Prophater, MD, Bay City, Chairman, Legislative Policy Committee; Vernon V. Bass, MD, Saginaw, Speaker, MSMS House of Delegates; Governor Milliken; James D. Fryfogle, MD, Detroit, Vice Speaker, House of Delegates; Kenneth H. Johnson, MD, Lansing, Chairman, Legal Affairs Committee and Secretary, MSMS, and Brooker L. Masters, MD, Fremont, Vice Chairman, MSMS Council. Also participating in the discussions were Warren Tryloff, MSMS director, and Bruce Ambrose, manager, MSMS department of governmental relations.

Newspapers all over Michigan carried snowmobile statement

With several bills pending in the Michigan legislature to license and regulate snowmobiles, the MSMS position was released to newspapers and was well received by the editors.

A quick sampling of some of the newspapers' clippings reveals these headlines:

Traverse City Record Eagle:
Physicians Seek Snowmobile Restrictions

Bay City Times:
Restrictions Urged on Snowmobilers by Medical Society

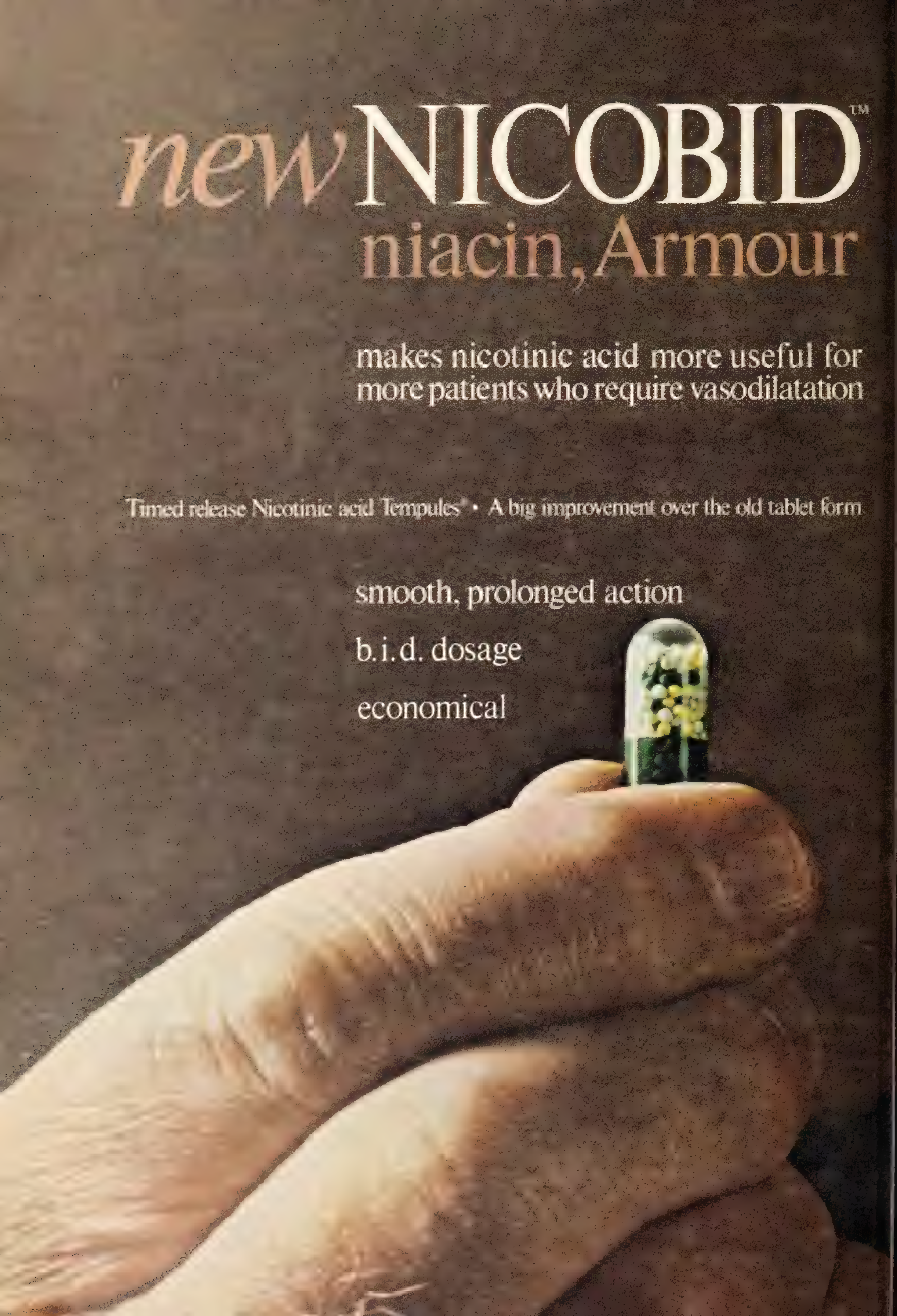
South Haven Tribune:
Doctors Ask Snowmobile Rules to Reduce Deaths

Sturgis Journal:
Doctors Ask for Strict Regulations of Snowmobiles

Port Huron Times Herald:
Doctors Call for Controls, Education in Snowmobiling

Bad Axe Daily Tribune:
State Medical Group Calls for New Laws for Snowmobiles

The MSMS Committee on Highway Injuries had studied snowmobile injuries and deaths and recommended several improvements to The MSMS Council, which approved them. The MSMS Department of Communications held a news conference in Detroit with Paul W. Gikas, MD, Committee Chairman, and Charles Frey, MD, Committee member; and a news release was issued. Quite a number of newspapers also developed editorials supporting the MSMS positions, offered in the interest of public safety and health.



new NICOBID™
niacin, Armour

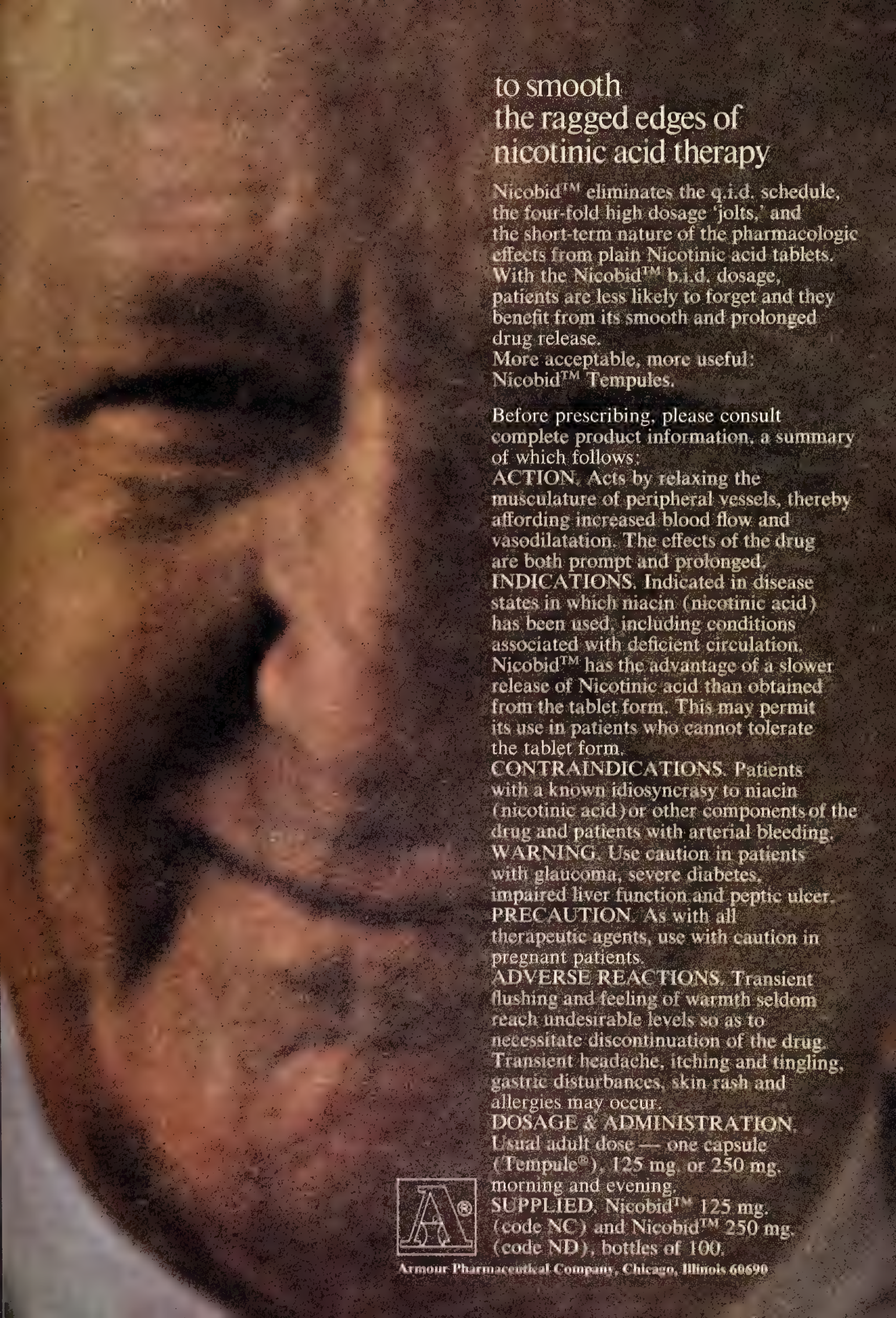
makes nicotinic acid more useful for
more patients who require vasodilatation

Timed release Nicotinic acid Tempules® • A big improvement over the old tablet form

smooth, prolonged action

b.i.d. dosage

economical



to smooth the ragged edges of nicotinic acid therapy

Nicobid™ eliminates the q.i.d. schedule, the four-fold high dosage 'jolts,' and the short-term nature of the pharmacologic effects from plain Nicotinic acid tablets. With the Nicobid™ b.i.d. dosage, patients are less likely to forget and they benefit from its smooth and prolonged drug release.
More acceptable, more useful:
Nicobid™ Tempules.

Before prescribing, please consult complete product information, a summary of which follows:
ACTION. Acts by relaxing the musculature of peripheral vessels, thereby affording increased blood flow and vasodilatation. The effects of the drug are both prompt and prolonged.
INDICATIONS. Indicated in disease states in which niacin (nicotinic acid) has been used, including conditions associated with deficient circulation. Nicobid™ has the advantage of a slower release of Nicotinic acid than obtained from the tablet form. This may permit its use in patients who cannot tolerate the tablet form.
CONTRAINDICATIONS. Patients with a known idiosyncrasy to niacin (nicotinic acid) or other components of the drug and patients with arterial bleeding.
WARNING. Use caution in patients with glaucoma, severe diabetes, impaired liver function and peptic ulcer.
PRECAUTION. As with all therapeutic agents, use with caution in pregnant patients.
ADVERSE REACTIONS. Transient flushing and feeling of warmth seldom reach undesirable levels so as to necessitate discontinuation of the drug. Transient headache, itching and tingling, gastric disturbances, skin rash and allergies may occur.
DOSAGE & ADMINISTRATION. Usual adult dose — one capsule (Tempule®), 125 mg. or 250 mg. morning and evening.
SUPPLIED. Nicobid™ 125 mg. (code NC) and Nicobid™ 250 mg. (code ND), bottles of 100.

Armour Pharmaceutical Company, Chicago, Illinois 60690

Council minutes

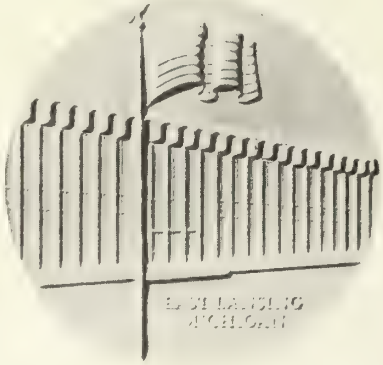
Extract of MSMS Council minutes; meeting of April 21, 1971

Non-Member Survey—According to Council direction, the names of physicians in each county who are not members of MSMS will be forwarded to the president and secretary of the component medical society for information and whatever action they think is feasible. A list of non-members, according to type of practice, has been compiled by the MSMS Bureau of Economic Information, according to Council request, and mailed to each Council member.

Detroit Art Institute—The Council approved appointment of an ad hoc MSMS committee to work with the Detroit Institute of Arts to make available to MSMS members and their wives at the time of the Annual Session an art object of medical interest.

Management Study—The Council approved initiation of the second phase of the management study, under the direction of the 1970 House of Delegates resolution. The second phase is to include the appointment of an advisory committee by The Council chairman, and the final questionnaire is to be brought to The Council before it is sent to the members. Phase II of the study will seek to find ways to improve the representation and participation of members in MSMS and to improve tangible direct member benefits.

MD-DO Activity—The Council approved recent joint activities of MSMS and the Michigan Association of Osteopathic Physicians and Surgeons. These activities include three meetings at which MSMS and MAOPS representatives agreed to work together in legislative malpractice study, foundations and peer review. On April 16, the two organizations held a news conference on the stoppage of Medicaid payments and the two organizations mailed letters to all legislators urging funding for the Department of Social Services.



Education Liaison—The Council authorized the Education Liaison Committee to consider further a proposal by the deans of Michigan's three medical schools that MSMS establish its own guaranteed loan fund for medical students, through Michigan banks. Any Michigan resident in medical school in the state or elsewhere, would be eligible to apply and the financial aid offices of the medical schools would supply documentation of need if requested. The Council directed that the committee's next meeting include representatives of several Michigan banks, the AMA-ERF, and other appropriate groups, to provide advice.

Council of Medical Staffs—The Council referred the matter of the relationship of medical staffs to organized medicine back to the Committee on Professional Insurance Plans for further study and a subsequent report.

Peer Review—The Council approved the Guidelines for the MSMS Peer Review Program drawn up by the Committee on Utilization Review and Health Insurance Problems. The Council directed the Legal Affairs Committee to determine if any legislation is needed to immunize peer review committees from all liability arising out of their duties; to ascertain what legislation may be needed to protect such committees from the disclosure of their findings, opinions, records and correspondence by subpoena and testimony in any litigation, arbitration or hearing of any kind.

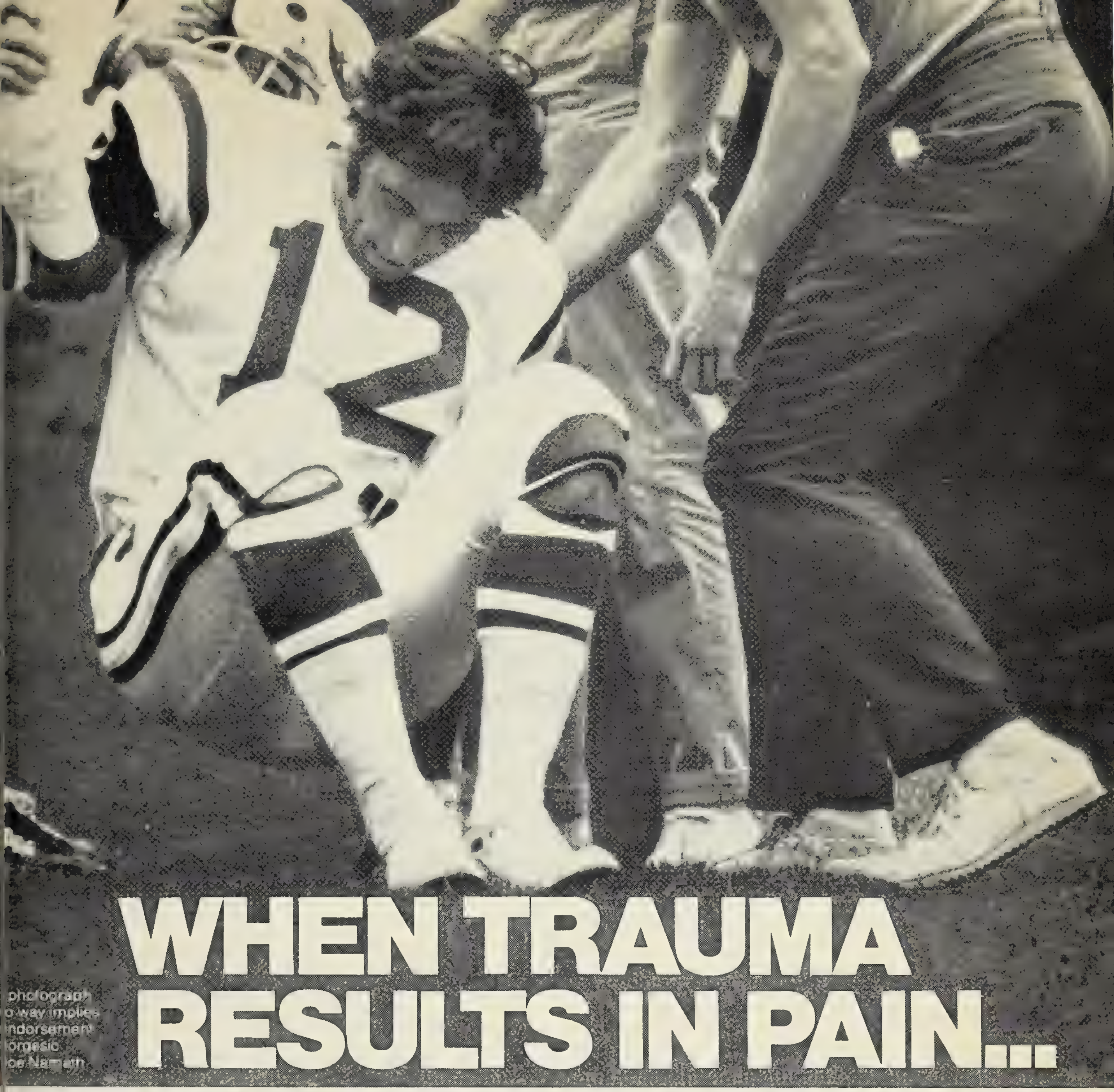
Health Planning—The Council asked the Committee on Governmental Medical Care Programs to revise their proposed Statement of Policy about Comprehensive Health Planning with respect to physician representation on CHP planning bodies. The Council directed the Committee on Planning and Priorities to study and make recommendations to the AMA Council on Planning and Development through Donald N. Sweeny, Jr., MD, Detroit, chairman of the MSMS delegation to the AMA.

Legislation—The Council authorized an appropriate medical society committee to develop a paper stating principles doctors believe are necessary to a viable national health care delivery program, such paper to be widely distributed through the media;

The Council approved MSMS restatement of support for Senate Bill 3 on abortion which makes the operation a matter between physician and patient, with certain restrictions;

The Council approved MSMS support of Senate Bill 220, which would repeal the Criminal Code section which includes in the manslaughter charge a count for procuring or attempting to procure an abortion;

The Council approved MSMS support of SB 77 permitting trained lay individuals to go to the scene of a death and order the body removed, with an amendment stating the lay investigator is a "representative of the medical examiner."



orgesic . . . provides effective analgesia and relief of associated muscle spasm

Contraindications: Because of the mild anticholinergic effect of orphenadrine, Norgesic should not be used in patients with glaucoma, pyloric or duodenal obstruction, achalasia, prostatic hypertrophy or obstructions at the bladder neck. Norgesic is also contraindicated in patients with myasthenia gravis and in patients known to be sensitive to aspirin, phenacetin or caffeine.
Since mental confusion, anxiety and tremors have been reported in patients receiving orphenadrine and propoxyphene concurrently, it is recommended that Norgesic not be given in combination with propoxyphene (Darvon®).
Warnings: USE IN PREGNANCY: Since safety of the use of this preparation in pregnancy, during lactation, or in the child-bearing age has not been established, use of the drug in such patients requires that the potential benefits of the drug be weighed against its possible hazard to the mother and child.
USE IN CHILDREN: The safe and effective use of this drug in children has not been established; therefore, the physician must weigh the benefits against the potential hazards.
Precautions: It has been reported that prolonged or excessive use of phenacetin may result in nephrotoxicity. Caution, therefore, should be exercised when Norgesic is administered to patients with renal disorders. It should also be used with caution in patients with tachycardia.
Adverse Reactions: Side effects of Norgesic are those seen with APC or those usually associated with mild anticholinergic agents. These may include tachycardia, palpitation, urinary hesitancy or retention, dry mouth, blurred vision, dilatation of the pupil, increased intraocular tension, weakness, nausea, vomiting, headache, dizziness, constipation, drowsiness, and rarely, urticaria and other dermatoses. Infrequently an elderly patient may experience some degree of confusion. Mild central excitation and occasional hallucinations may be observed. These mild side effects can usually be eliminated by reduction in dosage. One case of aplastic anemia associated with the use of Norgesic has been reported. No causal relationship has been established. **Dosage and Administration:** Adults—1 to 2 tablets 3 to 4 times daily.

Riker Laboratories, Inc.
NORTHRIDGE, CALIFORNIA 91324
A SUBSIDIARY OF 3M COMPANY

NORGESIC®
(orphenadrine citrate, 25 mg., aspirin, 225 mg., phenacetin, 160 mg., caffeine, 30 mg.)
the versatile analgesic

When irritable colon feels like this

...in the presence of spasm or hypermotility, gas distension and discomfort, **KINESED®** provides more complete relief:

- ☐ **belladonna alkaloids—for the hyperactive bowel**
- ☐ **simethicone—for accompanying distension and pain due to gas**
- ☐ **phenobarbital—for associated anxiety and tension**

Composition: Each chewable, fruit-flavored, scored tablet contains: 16 mg. phenobarbital (warning: may be habit-forming); 0.1 mg. hyoscyamine sulfate; 0.02 mg. atropine sulfate; 0.007 mg. scopolamine hydrobromide; 40 mg. simethicone.

Contraindications: Hypersensitivity to barbiturates or belladonna alkaloids, glaucoma, advanced renal or hepatic disease.

Precautions: Administer with caution to patients with incipient glaucoma, bladder neck obstruction or urinary bladder atony. Prolonged use of barbiturates may be habit-forming.

Side effects: Blurred vision, dry mouth, dysuria, and other atropine-like side effects may occur at high doses, but are only rarely noted at recommended dosages.

Dosage: Adults: One or two tablets three or four times daily. Dosage can be adjusted depending on diagnosis and severity of symptoms. Children 2 to 12 years: One half or one tablet three or four times daily. Tablets may be chewed or swallowed with liquids.

STUART PHARMACEUTICALS | Pasadena, California 91109 | Division of ATLAS CHEMICAL INDUSTRIES, INC.

(from the Greek **kinetikos,**
to move,
and the Latin **sedatus,**
to calm)

KINESED®

antispasmodic/sedative/antiflatulent

Spring peeper (tree frog, *Hyla crucifer*): this small amphibian can expand its throat membrane with air until it is twice the size of its head.

Michigan Mediscene

June 5-6—Michigan physicians are invited to attend the Michigan Twins Association's 25th annual meeting in Grand Rapids; contact: John B. Oumedian, president, 1252 Webster, NW, Grand Rapids, 49504

June 6—Michigan Society of Internal Medicine, 11 a.m. board meeting, MSMS headquarters

June 7-9—24th annual Conference on Aging, sponsored by the Institute of Geriatrics of Wayne State University and the University of Michigan, at the Rackham Building, U-M; contact: Institute of Geriatrics, 1021 E. Huron, Ann Arbor, 48104

June 7-9—Annual Conference of the Initial Management of the Acutely Ill or Injured, sponsored by the University of Michigan Extension Service; contact: Charles Frey, MD, chairman, The U-M Extension Service, Conference Department, 412 Maynard St., Ann Arbor, 48104

June 14-18—Seventh Annual Northern Michigan Summer Program of the University of Michigan, Shanty Creek Lodge, Bellaire, contact: Ralph Lewis, associate program manager, Department of PG Medicine, Towsley Center, The University of Michigan, Ann Arbor 48104

June 16—MSMS Council, noon to 5 p.m., MSMS headquarters, East Lansing, contact: Warren F. Tryloff, MSMS director

June 20-24—Many Michigan physicians will attend the AMA Convention in Atlantic City

June 24-26—52nd annual meeting, Michigan Hospital Association, Grand Hotel, Mackinac Island, contact: H. Allan Barth, executive director, MHA, 2213 E. Grand River Ave., Lansing, 48912

June 25-26—76th annual Upper Peninsula Medical Society summer meeting, Student Union Building, Michigan Technological University, Houghton, Mich., contact: H. J. Winkler, MD, L'Anse, UPMS president

July 29-30—51st annual Coller-Penberthy-Thirlby Medical Conference, Park Place Motor Inn, Traverse City; contact: James W. Hall, MD, arrangements chairman, Beaumont Bldg, 1109 Sixth St., Traverse City, 49684

July 30—Annual midsummer meeting of The MSMS Council, Boyne Highlands, contact: Warren F. Tryloff, MSMS director

Sept. 16-18—Michigan regional meeting of the American College of Physicians, in conjunction with the Michigan Society of Internal Medicine, Sheraton-Cadillac Hotel, Detroit, contact: Muir Clapper, MD, ACP Governor for Michigan, Wayne State University School of Medicine, 1400 Chrysler Freeway, Detroit, 48207

Oct. 1—Michigan Hospital Association House of Delegates meeting, Park Place Motor Inn, Traverse City, contact: H. Allan Barth, executive director, MHA, 2213 E. Grand River Ave., Lansing, 48912

Oct. 3 and 6—MSMS Council, Pantlind Hotel, Grand Rapids, contact: Warren Tryloff, director, MSMS

Oct. 3-7—1971 MSMS Annual House of Delegates meeting and Scientific Sessions, Pantlind Hotel, Grand Rapids

Oct. 5-7—1971 Annual Convention of the Woman's Auxiliary to MSMS, Pantlind Hotel, Grand Rapids

Oct. 11—Departure day for 14-day MSMS Orient Adventure; contact: Miss Helen Schulte, MSMS headquarters

Oct. 20-21—Michigan TB and Respiratory Disease Education Meeting, Kellogg Center, East Lansing, contact: Les Harcus, Public Relations, Michigan TB and Respiratory Disease Association, 403 Seymour, Lansing

Oct. 25-29—Michigan Nurses Association Convention, Pantlind Hotel, Grand Rapids, contact: William E. Ludwig, public relations director, MNA, 120 Spartan Ave., East Lansing, 48823

Nov. 10—MSMS Council, MSMS Headquarters, East Lansing, noon to 5 p.m., contact: Warren F. Tryloff, MSMS director

Nov. 28-Dec. 10—Many Michigan physicians will be attending the AMA Clinical Convention in New Orleans

Dec. 8—MSMS Council, MSMS Headquarters, East Lansing, 9:30 a.m., contact: Warren F. Tryloff, MSMS director

The advertising in
MICHIGAN MEDICINE
keeps you informed
and helps pay the
publishing costs.

When the local
representative calls, Doctor,
tell him you saw
his company's ad
in your journal.

THE FINEST NAME IN MEDICAL-DENTAL ARTS

THE DAVID WHITNEY BUILDING

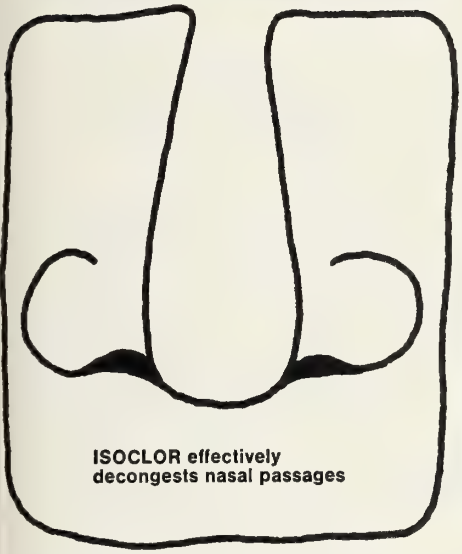
WOODWARD AT GRAND CIRCUS PARK AND WASHINGTON BOULEVARD

IMMEDIATE OCCUPANCY • VARIOUS SIZE SUITES AVAILABLE

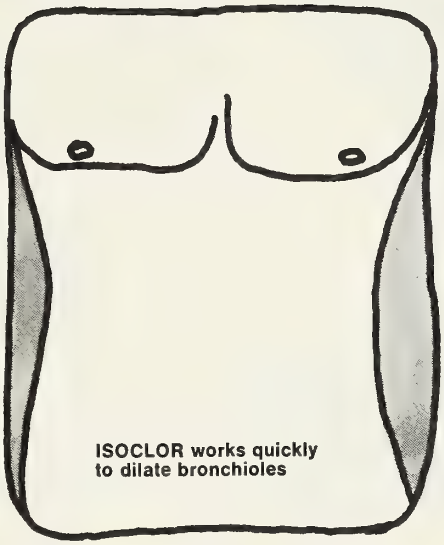
THE DAVID WHITNEY BUILDING CONTAINS DETROIT'S FINEST MEDICAL, DENTAL AND X-RAY LABORATORIES PLUS A PHARMACY FOR YOUR CONVENIENCE, LOCATED MINUTES FROM THE NEW DETROIT MEDICAL CENTER. • AUTOMATIC ELEVATORS • BARBER SHOP • SNACK SHOP • BANK • COMPLETE BUILDING SECURITY • FINEST PERSONALIZED JANITORIAL AND MAINTENANCE INCLUDED • ADJACENT TO LARGE PARKING GARAGE • SPECIAL RATES TO NEW DOCTORS

hayman management company 962-3058

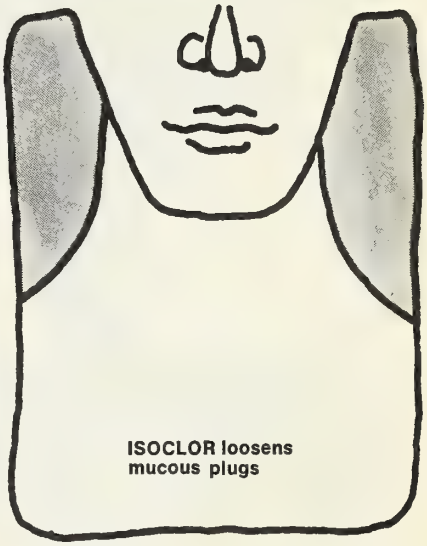
HERE ARE THE COLD FACTS:



ISOCLOR effectively decongests nasal passages

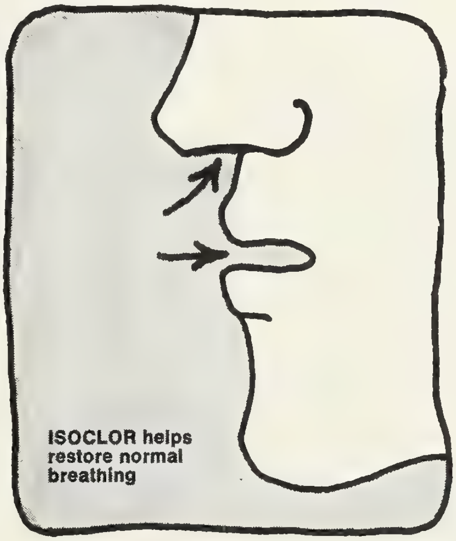


ISOCLOR works quickly to dilate bronchioles



ISOCLOR loosens mucous plugs

ISOCLOR relieves runny eyes



ISOCLOR helps restore normal breathing

ISOCLOR promptly and effectively combats symptomatic miseries of the common cold and influenza

ISOCLOR helps patients face the cold facts

ISOCLOR®

Isoclor provides quick, long lasting relief of respiratory congestion and discomfort brought on by common colds, influenza, and allergies. Isoclor contains chlorpheniramine maleate — one of the most potent and safest antihistamines. And pseudoephedrine HCl — a decongestant bronchodilator providing effective and long lasting relief for the entire respiratory tract. Both work to extend the range of relief.

COMPOSITION: Each tablet or 2 teaspoonfuls of liquid contains:

Chlorpheniramine Maleate	4 mg.
Pseudoephedrine HCl	25 mg.

Each ISOCLOR Timesule contains:

Chlorpheniramine Maleate	10 mg.
Pseudoephedrine HCl	65 mg.

In a special pellet form providing both prompt and sustained effect.

INDICATIONS: For symptomatic relief of colds, hay fever, allergic conjunctivitis, perennial rhinitis of allergic origin and sinusitis. Opens nasal, sinus and bronchial passages orally.

CONTRAINDICATIONS: Sensitivity to antihistamines or sympathomimetic agents. Severe hypertension or severe cardiac disease.

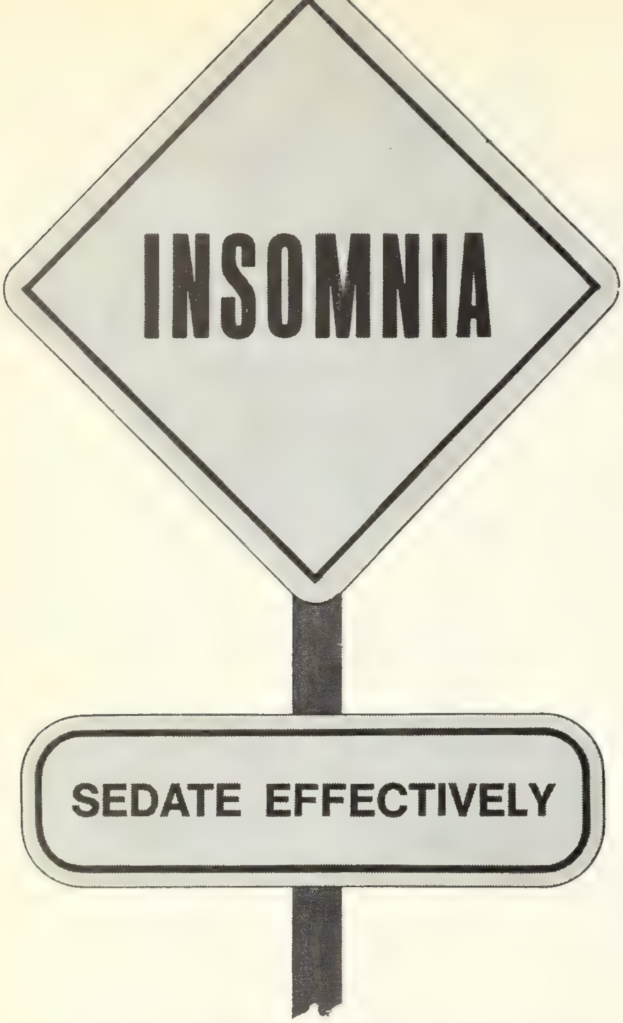
PRECAUTIONS: Use with caution in patients suffering with hyperthyroidism. Patients susceptible to the soporific effects of chlorpheniramine should be warned against driving or operating machinery should drowsiness occur.

CAUTION: Federal law prohibits dispensing without prescription.

SUPPLIED: Tablets: Bottles of 100 and 1000. Liquid: 4 oz. bottles, pints, and gallons; Timesules: Bottles of 50, 250, and 1000.

DOSAGE AND ADMINISTRATION:	Tablets	Liquid	Timesule
Adults:	1 q. 4 h.	2 tsp. q. 3-4 h.	1 q. 12 h.
Children 6-12 years:		1 tsp. q. 3-4 h.	
40-50 pounds:		¾-1 tsp. q. 3-4 h.	
30-40 pounds:		½-¾ tsp. q. 3-4 h.	
20-30 pounds:		¼-½ tsp. q. 3-4 h.	
15-20 pounds:		⅛-¼ tsp. q. 3-4 h.	

ARNAR-STONE LABORATORIES, INC.
QUALITY—RESEARCH—SERVICE
SUBSIDIARY OF AMERICAN HOSPITAL SUPPLY CORPORATION
Mount Prospect, Illinois 60056



With QUĪ-A-ZONE — you can sedate effectively. A balanced combination of short, intermediate, and long-acting barbiturates (totaling 100 mg.) in a rapidly disintegrating tablet — sedation is provided within a few minutes . . . followed by sound restful sleep . . . usually without morning hangover. The four barbiturates in QUĪ-A-ZONE have dual channels of elimination (renal and hepatic) to lessen metabolic burden, decrease barbiturate retention, and minimize depression.

QUĪ-A-ZONE™

Each rapidly-disintegrating tablet contains 25 mg. secobarbital, 25 mg. pentobarbital, 25 mg. butabarbital, and 25 mg. phenobarbital. Bottles of 100.
Usual Adult Dose: 1 to 2 tablets before retiring.
PRECAUTION: Should not be administered to patients sensitive to barbiturates, or in cases of known previous addiction. Warning: May be habit forming.

W-C PRECISION PHARMACEUTICALS

SEND FOR SAMPLES.

WALKER, CORP & CO., INC.
Syracuse, New York 13201

Would you believe $1 million from AMA-ERF to Michigan students?

(This is another in the series of articles about the AMA and its services to help MSMS members keep well informed about their national organization—Editor)

By John J. Coury, MD, Port Huron
Member, MSMS Delegation
To AMA House of Delegates

Sometimes we hear medical students bad-mouth the AMA-ERF Student Loan Guarantee Program. One would think it must be of no real help to anyone.

That's far from the truth, although many of us think the AMA-ERF loan program can be improved.

Can you guess how much money has been obtained by *Michigan* medical students, interns and residents through the AMA-ERF program?

Would you believe more than $1 million?

Since the program began in 1962, AMA-ERF has guaranteed the following loans through the National Bank of Detroit to Michigan medical students, interns and residents:

1,215 total loans amounting to $1,383,190 through Dec. 1970.

Following are the figures for 1970, all through National Bank of Detroit:

University of Michigan	33 loans	$41,000
Wayne State University	34 loans	$45,800
Interns & Residents	16 loans	$21,900
Totals	83 loans	$108,700

* * *

MSU students must apply through Continental Illinois National Bank of Chicago, because the AMA contract with National Bank of Detroit limits loans to students, residents and interns in 50-mile radius.

* * *

Here is how the loan program works . . .

The student applying to AMA-ERF can obtain loan applications from his Dean's office. The application is given to the Dean, reviewed, and if approved sent by the Dean to the AMA. The AMA guarantees the repayment and sends it to the bank for processing. The bank issues a check to the student and mails it to the Dean for distribution. The interest is due each Dec. 31. The National Bank of Detroit has been charging 7 per cent simple interest for the past several years. They can charge no more than one per cent over their prime interest rate. The Continental Illinois National Bank recently was charging 9 per cent to the students.

Loans are not available to incoming freshman students. The student must complete at least the first quarter or first semester. There is a maximum of $1,500 during a 12-month period, and a maximum of $10,000.

* * *

The Michigan delegation to the AMA House has been studying possible ways to improve the AMA loan program and we intend to introduce a resolution in June before the AMA delegates. Students and medical school faculty members would like to have the $1,500 maximum per year raised, as high as $3,000 annually if possible. Students are also unhappy about paying interest each year while in medical school and would prefer to pay after they graduate or after they complete military service.

* * *

At the March meeting of the AMA-ERF Board of Directors, a program was authorized to provide interest-free loans to carefully selected deserving needy medical students.

The number of students and amount of loans subsidized will depend on AMA-ERF's success in soliciting funds earmarked for the program.

Funds will be solicited from business, industry, foundations and philanthropists.

AMA-ERF will solicit cooperation of medical schools in implementing the project. Each participating school would agree to make yearly grants up to $3,000 for the freshman and sophomore years to each student selected. AMA-ERF, through its participating banks, would lend up to $1,500 each year during the freshman and sophomore years and up to $4,500 during the junior and senior years.

AMA-ERF would increase its loan security fund by 8% on all notes issued, and would pay the interest on these loans for four years. After receiving his MD degree, the borrower would assume the interest payments and upon entering his practice would be responsible for monthly payments on both principal and interest.

* * *

Vincent Strazzabosco is Manager of the Student Loan Guarantee Program at the AMA, 535 N. Dearborn, Chicago 60610.

CONSTIPATION
EVACUATE GENTLY

With EVAC-U-GEN — your patients with functional constipation can evacuate gently. Because EVAC-U-GEN has a mild laxative action and tends to cause the stool to be soft — it is highly desirable for those sensitive to harsh laxatives — particularly children, pregnant women, and geriatric patients. Recommend EVAC-U-GEN for the management of functional constipation. It is highly effective. Non-griping. Chewable. Very palatable. Economical.

EVAC-U-GEN®

A highly-flavored and palatable tablet of yellow phenolphthalein, bismuth subcarbonate, bismuth subgallate in special base. Chewable. Bottles of 35 and 100. Adult Dose: Chew 1 or 2 tablets night or morning. Children (up to age 10): 1/2 tablet. A citrus drink taken with tablet will stimulate action.
PRECAUTION: Do not use when symptoms of appendicitis are present and discontinue use if skin rash appears. Dependence on laxatives can result from continued use.

W-C PRECISION PHARMACEUTICALS

SEND FOR SAMPLES.
WALKER, CORP & CO., INC.
Syracuse, New York 13201

Medical care programs

By Herbert Mehler, Staff Assistant
MSMS Committee on
Government-Medical Care Programs

"Group practice is inevitable and will become the family health care center of the future," American Medical Association President Walter C. Bornemeier, MD, has predicted.

Regardless of whether these structures are called prepaid group practice (PPGP), health maintenance organizations (HMO's), or family health centers (FHC), predictions that this type of "system" will change and improve the delivery of health care are accelerating.

Following is a description of the three structures:

Health Maintenance Organization: A public or private organization which provides health services to individuals enrolled with the organization on a per capita pre-payment basis, and which provides all health services that a defined population might reasonably require, including minimum emergency care, inpatient hospital and physician care, ambulatory physician care, and outpatient preventive medical services. (As defined in HR 5615 introduced in Congress)

Prepaid Group Practice: The application of medical service by three or more physicians formally organized to provide medical care, consultation, diagnosis and/or treatment through the joint use of equipment and personnel, and with income from medical practice distributed in accordance with methods previously determined by members of the group. (As defined by AMA)

Family Health Center: FHC's comprise three parts: (1) Insuring agency, Blues or other non-profits, regular for-profit insurance company; (2) providers—the doctors, hospitals, NHs, and (3) management and utilization controls to check on (1) and (2). Could be in Social Security Administration or hired out to a private management outfit.

Please note that an HMO *is required* to offer total comprehensive health care to enrollees. A prepaid group practice plan *may offer* comprehensive health care but unless complete coverage is available may not qualify as an HMO.

At the end of April, 1971 there were approximately 15 potential or developing programs that could be described as HMO's or comprehensive prepaid group practice plans. Doubtless, the number will increase rapidly and MSMS is assembling information throughout Michigan for thorough study.

The MSMS Committee on Governmental Medical Care Programs appointed a special committee to review these programs in the following context:

(1) How can MSMS be constructive?

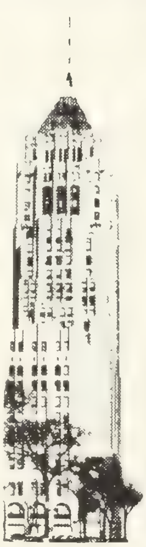
(2) What type of structure should be recommended to The Council which will provide high quality comprehensive care at reasonable cost to patients while retaining independent medical judgment?

If you desire information about activities in your area please address your inquiry to MSMS.

Federal Controlled Substances Act of 1970

MSMS has been advised that confusion exists with respect to the completion of applications by physicians registering with the Bureau of Narcotics and Dangerous Drugs (BNDD) as required under P. L. 91-513—The Controlled Substances Act of 1970.

Information is available at MSMS to assist you.



PERFECT MAKES PRACTICE.

And "perfect" is what the Fisher Building offers a professional practice: Unmatched office facilities; indoor parking contiguous to your office; a location that's easy for you and your patients to reach from the entire metropolitan area. You're near the many specialists in the profession, as well as labs and hospitals, making internal referrals most practical for both patient and physician. Near, of course, to shops and restaurants, to a bookstore and banks and a post office, and the magnificent Fisher stage. It's an atmosphere to accomplish things in. Call us now for diagnosis and consultation on your office needs. As our patient you will find your office problems cured!

THE FISHER BUILDING
Across from General Motors Building
Detroit 48202 • Phone 874-4444

Here are newly-approved guidelines for MSMS Peer Review Program

The MSMS Council in its April 21 meeting approved the following Guidelines for the MSMS Peer Review Program, as drawn up by the MSMS Committee on Utilization Review and Health Insurance Programs.

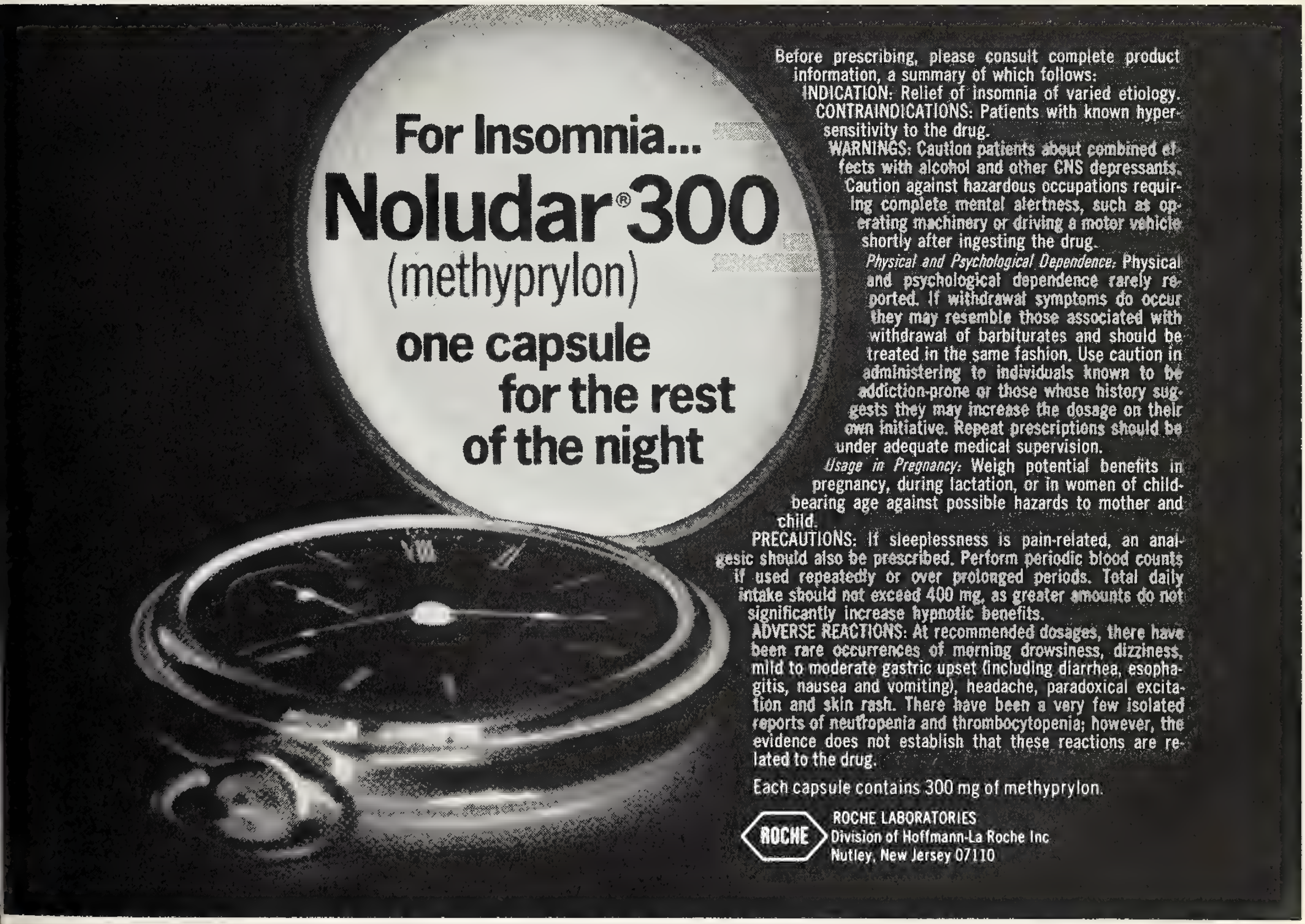
The guidelines will determine the new program's structure, which is composed of (1) county medical society committees dealing with utilization or fee complaints, (2) regional medical advisory committees within each councilor district and (3) the MSMS Committee on Utilization Review and Health Insurance Programs. The Guidelines will assist all three in performing their functions.

The MSMS Peer Review Program was established by The Council in August, 1970, through component county medical societies, to assist and advise insurance carriers in the review of claims, arbitration of disputes and review of utilization frequency and charge patterns.

I. Preamble

The Peer Review procedure has existed for years in Medicine to help assure the best possible medical treatment for all patients. Peer Review also is mandated under Title 18 and 19 of the Social Security Act (Medicare and Medicaid).

The Michigan State Medical Society has always supported effective review mechanisms to help maintain the highest quality of medical practice and to help evaluate medical charges. MSMS formally established its comprehensive peer review structure in 1970. "Peer Review is a review of physician's services by his colleagues, embracing evaluation of the quality of care provided, the frequency, volume and relationship of services ordered to the pertinent diagnosis, and the propriety of the charges submitted for the professional services rendered." Peer Review is constructed to include: Claim Reviews, Utilization Review, and Review of Quality of Medical Care. The MSMS program is composed of (1) component medical society committees dealing with utilization, fee complaints and quality of medical practice, (2) regional medical advisory committees within each MSMS councilor district, to act where no county society committee exists or aid those



Before prescribing, please consult complete product information, a summary of which follows:

INDICATION: Relief of insomnia of varied etiology.

CONTRAINDICATIONS: Patients with known hypersensitivity to the drug.

WARNINGS: Caution patients about combined effects with alcohol and other CNS depressants. Caution against hazardous occupations requiring complete mental alertness, such as operating machinery or driving a motor vehicle shortly after ingesting the drug.

Physical and Psychological Dependence: Physical and psychological dependence rarely reported. If withdrawal symptoms do occur they may resemble those associated with withdrawal of barbiturates and should be treated in the same fashion. Use caution in administering to individuals known to be addiction-prone or those whose history suggests they may increase the dosage on their own initiative. Repeat prescriptions should be under adequate medical supervision.

Usage in Pregnancy: Weigh potential benefits in pregnancy, during lactation, or in women of childbearing age against possible hazards to mother and child.

PRECAUTIONS: If sleeplessness is pain-related, an analgesic should also be prescribed. Perform periodic blood counts if used repeatedly or over prolonged periods. Total daily intake should not exceed 400 mg, as greater amounts do not significantly increase hypnotic benefits.

ADVERSE REACTIONS: At recommended dosages, there have been rare occurrences of morning drowsiness, dizziness, mild to moderate gastric upset (including diarrhea, esophagitis, nausea and vomiting), headache, paradoxical excitation and skin rash. There have been a very few isolated reports of neutropenia and thrombocytopenia; however, the evidence does not establish that these reactions are related to the drug.

Each capsule contains 300 mg of methyprylon.

ROCHE
ROCHE LABORATORIES
Division of Hoffmann-La Roche Inc
Nutley, New Jersey 07110

functioning, and (3) the MSMS Committee on Utilization Review and Health Insurance Problems, representing the advisory body for component societies and councilor districts, prepared to aid one and all.

It must be clearly understood that the peer review committee is a fact-finding mechanism, and recommendations are made on the basis of the facts. In the event of disagreement, the appeal mechanisms should be utilized. Peer review committees make recommendations but do not act as judge and jury.

II. Purposes

A. Component Medical Society Committees:

The purpose of the component medical society committee concerned with peer review is to review all cases brought before it by physicians, patients, institutions, insurance carriers and government agencies. The committee exists to (1) act as an intermediary between the involved parties in an attempt to resolve a dispute by mediation (the committee, however, should not involve itself in disputes that are under litigation), (2) to acquire available information regarding charge patterns, utilization patterns and standards of practice as they exist locally, (3) to establish liaison with hospital and ECF Utilization Committees, (4) to establish its own hearing procedures within the guidelines set forth by the MSMS Committee on Utilization Review and Health Insurance Problems, and (5) to make these procedures available to all interested parties, sharing data showing "usual and customary" charge patterns, and utilization patterns, and all matters pertaining to quality of practice, on a current and continuous basis.

B. Regional Medical Advisory Committee:

The purpose of the regional medical advisory committee is (1) to act as an appeal mechanism for disputes that cannot be solved at the local level and (2) to accept cases directly if a county medical society does not have a peer review mechanism or fails to act within a reasonable time when a case is submitted for mediation.

C. MSMS Committee on Utilization Review and Health Insurance Problems:

The purpose of this committee is (1) to establish guidelines for the MSMS Peer Review Program, (2) to act as the final mediator for unresolved disputes, (3) to acquire information re charge patterns, utilization and quality care standards for the entire state and (4) to

(Continued on Page 562)

℞ for protection!

Read the instructions below very carefully. They cover the most comprehensive protection and recovery program against loss or theft of all those valuable credit cards you may carry . . . *Call Collect* from anywhere in the world day or night seven days a week in case of loss or theft, *immediate protection.* Fill out the prescription blank and send it in today . . . An ounce of protection is worth a pound of cure!

MAIL TO

AMERICAN SERVICES INTERNATIONAL

Worldwide Credit Card Protection Wherever You Live or Travel

AMERICAN SERVICES INTERNATIONAL
P.O. Box 49206
Atlanta, Georgia 30329

I enclose $..................

☐ Charge my Master Charge

Acct. No. ☐☐☐☐☐☐☐☐☐☐☐☐

(Number Over Your Name) ☐☐☐☐

☐ Charge my BankAmericard

Acct. No. ☐☐☐☐☐☐☐☐☐☐☐☐

11201

☐ Yes, I'd like to have Credit Card Protection! Sign me up as a member of AMERICAN SERVICES INTERNATIONAL and send my official Credit Card Registration Form by return mail.

Membership Desired.. ☐ 3 years at $24 (a $12 saving) ☐ 1 year at $12

NAME ____________________

ADDRESS ____________________

CITY ____________________

Be sure to notify us of address change immediately.

Protect yourself against the fraudulent use of your credit cards.

When credit cards are missing, every second counts. Who do you notify? How do you do it? Can you remember all your cards? If you have an ASI Card all you need to do is call one number **COLLECT**.

Telephone (404) 633-3186

The $3,600 Audi has the same steering system as the $38,400 Ferrari.

It's called rack-and-pinion steering.

And it's the simplest, most direct, most responsive type of steering system any car ever had.

It's precisely this simplicity and directness that gives you such an uncanny feel of the road. And the better your feel of the road, the more control you have over the car.

Besides the $38,400† Ferrari, the Audi has a lot in common with a lot of other great automobiles.

The Audi has *inboard* disc brakes just like the Porsche racing car. And front-wheel drive just like the Cadillac Eldorado.

The Audi has the same trunk space as the Lincoln Continental. And just about the same headroom and legroom as the Rolls-Royce Silver Shadow.

Our interior looks so much like that of the Mercedes-Benz 280SE, you can hardly tell them apart.

And as for service, you'll get the same kind of expert service that a Volkswagen gets. Because a Porsche Audi dealer is part of the VW organization.

You don't hear about a car like the Audi every day. A car that in many respects bears a remarkable resemblance to some of the finest cars ever made.

That's why we don't consider $3,600 a lot of money for the car.

The way we look at it, it's a lot of cars for the money.

The $3,600* Audi®

Porsche Audi: a division of Volkswagen

*Suggested retail price East Coast P.O.E. $3,595.
Local taxes and other dealer delivery charges, if any, additional.
Whitewall tires optional at extra cost.
†1971 World Car Catalogue—Ferrari—$38,400.

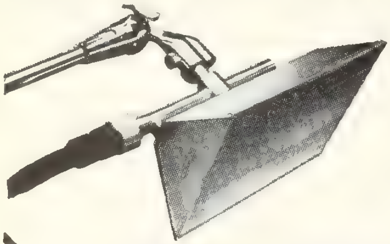
Tom Sullivan Porsche Audi, Inc.
499 S. Hunter Blvd., Birmingham

Wood Imports, Inc.
15415 Gratiot Ave., Detroit

Prestige Automobiles, Inc.
2955 S. Division Ave., Grand Rapids

Phil Gordon's, Inc.
2924 E. Grand River Ave., Lansing

BURDICK'S
NEW MW/225
MICROWAVE
DIATHERMY



INSTANT WARM-UP
MORE POWER
NEW VERSATILITY

The new MW/225 is an efficient, reliable source of therapeutic heat that is deeply penetrating, simple to control, and easily confined to specific treatment areas.

- **Instant warm-up/no waiting period**
- **125 watts of power output**
- **New directors offer effective wide-zone heating patterns at greater distances**
- **Flexible director cable; reliable 0/30-minute timer; solid state power supply designed and engineered for service-free operation; FCC Type Approval D-598**

The MW/225 is easy to operate, saves time and offers a wider range of applications. Fully-adjustable arm for easy positioning; modern styling, large casters for safe mobility, large storage space.

See your Burdick dealer for a demonstration, or write **The Burdick Corporation, Milton, Wisconsin 53563.**

BURDICK®

THE G. A. INGRAM COMPANY
4444 Woodward Avenue, Detroit, Michigan 48201
Telephone: TEmple 2-4444

consider matters directly from insurance carriers or government agencies including charge patterns or utilization problems when they concern an area rather than an individual physician.

III. Organization

A. Component Medical Society Committees:

The component medical society committee dealing with peer review matters should (1) be appointed (terms should be staggered to insure continuity) by the president or governing body of the county medical society, (2) be composed of a chairman and members in active practice, who represent family practice and as many of the various specialties of medicine as possible, (3) avail itself of assistance from each of the various medical specialties as such consultation may be required, and (4) have access to counsel from society committees such as Grievance, Ethics, etc. The committee shall not usurp the functions of the Ethics or other disciplinary committees.

B. Regional Medical Advisory Committee:

This committee is organized by each MSMS councilor for his district in cooperation with his respective component medical societies. The regional medical advisory committee may comprise (1) portions of councilor districts, (2) an entire councilor district, or (3) a combination of councilor districts. It functions as an appeal mechanism and as a substitute for non-existent or non-functioning component society committees.

C. MSMS Committee on Utilization Review and Health Insurance Problems:

The MSMS Committee on Utilization Review and Health Insurance Problems is appointed by the Chairman of The Council.

It should have (1) access to information on fees, the overhead cost of medical practice, and other pertinent information that will be generated by the MSMS Bureau of Economic Information and (2) establish liaison with government, health insurance council, the Blues, and interested consumer groups as it deems necessary to fulfill its responsibilities.

IV. Scope of Peer Review

A. To protect the public from unreasonable medical care costs resulting from either unreasonable claims, unnecessary utilization by physicians or patients or poor medical care that arises from either the private practice of medicine or the practice of medicine under the auspices of governmental agencies.

B. To protect the physician against ill-founded and unjust accusations of patients and/or such agencies which may be interested in securing or financing health services.

C. To accept documented complaints from all responsible sources.

D. To review such records and other pertinent information which may be presented to it for the purpose of recommending appropriate action.

E. To inform the public regarding the existence and functions of peer review committees. It shall be the responsibility of appropriate chairmen of committees, presidents of component societies and councilors to report accurately, the facts to public information media.

F. To adopt formal written procedures and policies, with appropriate records to process complaints and to notify complainants about disposition of their cases.

G. To maintain appropriate records of all cases reviewed.

V. Review Procedure

A. Conditions Prerequisite for Review by Component Society:

1. Evidence must be submitted to indicate an attempt was made to settle the dispute directly with the parties involved. Cases in litigation will not be considered.

2. A properly completed Peer Review Information Form must be submitted by the complainant to the Committee Chairman together with all other appropriate documentation. A suggested form is contained in Addendum "A" to these guidelines.

3. The president of the appropriate county society or councilor of the appropriate district shall act as necessary to assure proper processing of claims in his jurisdiction, or appeal to the MSMS Committee on Utilization Review and Health Insurance Problems.

B. Review Process:

1. Upon receiving a properly filed and documented case for review, the Chairman must promptly notify all interested parties that the case is scheduled for hearing by the Committee at the next regular meeting. Appropriate interested parties will be furnished with complete copies of materials used in the documentation of the case and, if considered necessary to aid the committee, may be invited to attend the hearing.

2. In addition to hearing and taking action on cases filed by the Blues, commercial carriers and fiscal intermediaries of Medicare and Medicaid, the Committee will also review cases from governmental agencies, medical institutions and patients. The Committee should also review cases filed by a physician member against any one of the above mentioned. Again, notification to the interested parties must be provided and documentation will be required prior to the hearing.

3. The Committee should attempt to reach a decision on all cases brought to its attention. If the component society committee chairman cannot reach a decision or does not desire to hear the case, the chairman has the obligation of referring the case to the Regional Medical Advisory Committee. All interested parties must be *promptly* notified of decisions reached.

C. Reciprocal Responsibility:

1. The operation of the peer review committee as a review mechanism can be effective only if its decision is honored by organizations and individuals who request the Committee's services. In the event of an appealed decision by either party to the dispute, the County Chairman should immedately submit the case to the Regional Medical Advisory Committee together with all appropriate documentation. Finally, either the county or Regional Advisory Committee may ask the MSMS Committee on Utilization Review and Health Insurance Problems to study unresolved cases. This committee may refer unresolved problems and those involving questions of ethical or judicial nature to the appropriate MSMS commission or committee for advice and direction.

2. The MSMS Committee on Utilization Review and Health Insurance Problems shall through its chairman keep the Michigan State Medical Society Council appraised of any pertinent findings, trends or information obtained through its study, which would have an impact on the delivery of the highest medical care to the patients of Michigan. Similarly, The Council, officers of MSMS, Bureau of Economic Information, and other interested parties should lend full support and information to state and county committees.

3. It is further recommended by the committee that for the proper operation of peer review, the Blues, health insurance council, and appropriate governmental agencies should establish reciprocal committees that can respond to the Michigan State Medical Society committee regarding complaints arising from the services of these organizations.

Precision is a natural goal when you prescribe thyroid replacement therapy.

When you prescribe Proloid (thyroglobulin) you specify a precision blend of the two natural active hormones—T_4 and T_3—in their natural protein, *thyroglobulin.*

It's because Proloid is the natural thyroid hormone-globulin complex extracted and purified of unnecessary glandular debris.

91 control tests, 2 clinical assays: Beginning with the USP iodine assay and continuing through chromatographic analysis for T_4 and T_3 content and including testing in hypothyroid humans—Proloid is made as precise as the natural product can get, batch after batch.

New 2 grain tablet: Precision extends to dosage. With the introduction of a new 2 grain tablet, titration can be even more conveniently achieved with the full range of Proloid dosages: *¼, ½, 1, 1½, the new 2, 3, and 5 grain tablets.*

WC **Warner-Chilcott**, Morris Plains, N. J. 07950

as close
to precision as
the natural
can get

Proloid®
(thyroglobulin)
the natural for precision

PR-GP-12-B&W

Proloid®**(thyroglobulin)**

Description: Proloid (thyroglobulin) is obtained from a purified extract of frozen hog thyroid. It contains the known calorigenically active components, sodium levothyroxine (T_4) and sodium liothyronine (T_3). Proloid (thyroglobulin) conforms to the primary USP specifications for desiccated thyroid—for iodine based on chemical assay—and is also biologically assayed and standardized in animals.

Chromatographic analysis to standardize the sodium levothyroxine and sodium liothyronine content of Proloid (thyroglobulin) is routinely employed.

The ratio of T_4 and T_3 in Proloid (thyroglobulin) is approximately 2.5 to 1.

Proloid (thyroglobulin) is stable when stored at usual room temperature.

Indications: Proloid (thyroglobulin) is thyroid replacement therapy for conditions of inadequate endogenous thyroid production: *e.g.*, cretinism and myxedema. Replacement therapy will be effective only in manifestations of hypothyroidism.

In simple (nontoxic) goiter, Proloid (thyroglobulin) may be tried therapeutically, in nonemergency situations, in an attempt to reduce the size of such goiters.

Contraindication: Thyroid preparations are contraindicated in the presence of uncorrected adrenal insufficiency.

Warnings: Thyroglobulin should not be used in the presence of cardiovascular disease unless thyroid-replacement therapy is clearly indicated. If the latter exists, low doses should be instituted beginning at 0.5 to 1.0 grain (32 to 64 mg) and increased by the same amount in increments at two-week intervals. This demands careful clinical judgment.

Morphologic hypogonadism and nephroses should be ruled out before the drug is administered. If hypopituitarism is present, the adrenal deficiency must be corrected prior to starting the drug.

Myxedematous patients are very sensitive to thyroid, and dosage should be started at a very low level and increased gradually.

Precaution: As with all thyroid preparations this drug will alter results of thyroid function tests.

Adverse Reactions: Overdosage or too rapid increase in dosage may result in signs and symptoms of hyperthyroidism, such as menstrual irregularities, nervousness, cardiac arrhythmias, and angina pectoris.

Dosage and Administration: Optimal dosage is usually determined by the patient's clinical response. Confirmatory tests include BMR, T_3 ^{131}I resin sponge uptake, T_3 ^{131}I red cell uptake, Thyro Binding Index (TBI), and Achilles Tendon Reflex Test. Clinical experience has shown that a normal PBI (3.5-8 mcg/100 ml) will be obtained in patients made clinically euthyroid when the content of T_4 and T_3 is adequate. Dosage should be started in small amounts and increased gradually with increments at intervals of one to two weeks. Usual maintenance dose is 0.5 to 3.0 grains (32 to 190 mg) daily.

Instructions for Use: The following conversion table lists the approximate equivalents of other thyroid preparations to Proloid (thyroglobulin) when changing medication from desiccated thyroid, T_4 (sodium levothyroxine), T_3 (sodium liothyronine), or T_4/T_3 (liotrix).

Dose of Proloid (thyroglobulin)	Dose of desiccated thyroid	Dose of T_4 (sodium levothyroxine)	Dose of T_3 (sodium liothyronine)	Dose of liotrix (T_4/T_3)
1 grain	1 grain	0.1 mg	25 mcg	#1 (60 mcg/15 mcg)
2 grains	2 grains	0.2 mg	50 mcg	#2 (120 mcg/30 mcg)
3 grains	3 grains	0.3 mg	75 mcg	#3 (180 mcg/45 mcg)
4 grains	4 grains	0.4 mg	100 mcg	
5 grains	5 grains	0.5 mg	125 mcg	

In changing from Thyroid USP to Proloid (thyroglobulin), substitute the equivalent dose of Proloid (thyroglobulin). Each patient may still require fine adjustment of dosage because the equivalents are only estimates.

Overdosage Symptoms: Headache, instability, nervousness, sweating, tachycardia, with unusual bowel motility. Angina pectoris or congestive heart failure may be induced or aggravated. Shock may develop. Massive overdosage may result in symptoms resembling thyroid storm. Chronic excessive dosage will produce the signs and symptoms of hyperthyroidism.

(Treatment: In shock, supportive measures should be utilized. Treatment of unrecognized adrenal insufficiency should be considered.)

How Supplied: ¼ grain; ½ grain; scored 1 grain; 1½ grain; 3 grain; and scored 5 grain tablets, in bottles of 100 & 1000; and scored 2 grain tablets in bottles of 100.

Warner-Chilcott, Morris Plains, N. J. 07950

Osteopaths James Norden and Rodney Poling of Trenton's Riverside Hospital attend a "classroom in a briefcase" session.

Series of articles (concluding in this issue) surveying doctors' PG needs is basis for new U-M self-study project

By Judith Marr
Managing Editor

The Department of Postgraduate Medicine at the University of Michigan is testing a new series of audio-visual instructional programs for physicians in five southeastern Michigan community hospitals.

Called the "classroom in a briefcase," the programs are the result of two U-M studies, one of which has been extensively reported through a series of articles in *Michigan Medicine.*

The first study grew out of the Postgraduate Medicine Departments' interest in reaching physicians in community hospitals. Thus the department began tests in August, 1970, of modern teaching methods to interest busy practicing physicians.

(Continued on Page 566)

Previously, in the fall of 1968, the U-M Center for Research in the Utilization of Scientific Knowledge (CRUSK) began a study originated by the Committee on Postgraduate Medical Education of MSMS.

The findings of the CRUSK study have been reported in a series of articles in *Michigan Medicine* begun in November, 1970, and concluding on page 525 in this issue.

Michigan physicians' attitudes and opinions regarding continuing education were surveyed by the research center with long-range goals of strengthening effective processes of educational self-renewal and growth and of developing additional educational programs and activities to meet the continual needs for new knowledge experienced by physicians.

The CRUSK survery found that:

The problem facing planners of continuing education for Michigan doctors is to devise programs that capitalize upon the physician's motivational factors and at the same time show an awareness of the constraints under which he labors;

Richard Coak, MD, left, staff physician at Bixby Hospital, Adrian, and coordinator of the self-instruction project for doctors there, reviews the project with Ralph Lewis of the U-M Department of PG Medicine.

The typical Michigan physician is strongly motivated by his own standards and by the presence of physician colleagues to keep abreast of new developments in medicine;

The physician works a long week in which he can devote only two to three hours to the medium of education he deems his best, and

He considers the education available to him in his hospital in the fair-to-good range, while he

Established 1924

MERCYWOOD HOSPITAL

4038 Jackson Road **Conducted by Sisters of Mercy** **Ann Arbor, Michigan**

Telephone — 313 663-8571

Mercywood Hospital is a private neuropsychiatric hospital licensed by the Michigan Department of Mental Health. Mercywood specializes in intensive, multi-disciplinary treatment for emotional and mental disorders.

Accredited by the Joint Commission on Accreditation of Hospitals and the National League of Nursing. A full Blue Cross participating hospital.

Certified for: Medicare and M.A.A. programs

PSYCHIATRIC STAFF

Lyle M. Allis, M.D.
Robert J. Bahra, M.D.
Dean P. Carron, M.D.
Francis M. Daignault, M.D.
Gordon C. Dieterich, M.D.
*1904-1967

James R. Driver, M.D.
Alexander P. Dukay, M.D.
Robert L. Fransway, M.D.
Stuart M. Gould, Jr., M.D.
Leonard E. Himler, M.D.*
Sydney Joseph, M.D.

Hubert Miller, M.D.
Jacob J. Miller, M.D.
Rudolf Nobel, M.D.
Gerard M. Schmit, M.D.
Prehlad S. Vachher, M.D.
Richard D. Watkins, M.D.

rates that available at the state level as good-to-excellent.

The U-M pilot program therefore makes available to physicians in the five community hospitals a series of slide presentations synchronized with sound which the physician can run himself, in his own free time, at his own hospital.

A physician coordinator in each hospital using the pilot program was chosen by his local colleagues and introduced to the program at a dinner at the university. It was then his job to "sell" the program to his fellow staff members.

The hospitals involved are Pontiac General, Riverside Osteopathic in Trenton, Owosso Memorial, Beyer Memorial in Ypsilanti and Emma L. Bixby in Adrian.

"It is essential to pay attention to physicians in practice in small community hospitals," says Ralph E. Lewis, MPH, associate program manager, U-M Department of Postgraduate Medicine. "They have indicated in the CRUSK study (as reported in *Michigan Medicine*) that they are dissatisfied with their continuing education.

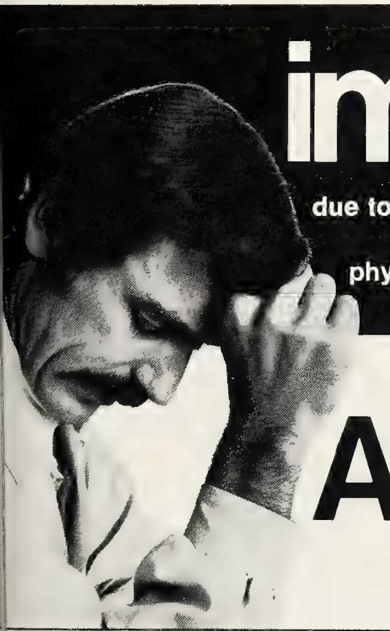
"We wanted some way to provide them with random access to a program in their hospitals. The slide-tape presentation is the most economical."

The U-M has developed some of its own slide-tape programs and established its own self-instruction unit in the Towsley Center. Other programs were acquired from the American Dental Association, Albany Medical College, the Upjohn Company and the University of Wisconsin Department of Postgraduate Medicine.

The pilot project has been well received at the five hospitals in which it is currently offered, and plans are, according to Mr. Lewis, to expand it. Eventually, it is hoped the program may be offered to individual physicians and all Michigan hospitals.

"We are doing an extensive evaluation," said Mr. Lewis. "One interesting thing we've found is that physicians are not so concerned with how the material is presented, if it is of value and on pertinent topics."

The U-M researchers also discovered in trial use of the tape-slide presentations at the U-M Medical Center meetings that "groups of physicians can be 'turned on' and do become actively involved in audio-visual self-instruction activities."



The treatment of

impotence

due to androgenic deficiency in the American male.
The concept of chemotherapy plus the
physician's psychological support is confirmed
as effective therapy.

NEW CLINICAL STUDY

The Treatment of Impotence
with Methyltestosterone Thyroid
(100 patients—Double Blind Study)
T. Jakobovits
Fertility and Sterility, January 1970
Official Journal of the
American Fertility Society

Android®
(thyroid-androgen) tablets

Double-Blind Study and Type of Patient:
100 patients suffering from impotence. Of the patients receiving the active medication (Android) a favourable response was seen in 78%. This compares with 40% on placebo. Although psychotherapy is indicated in patients suffering from functional impotence the concomitant role of chemotherapy (Android) cannot be disputed.

oice of 4 strengths:

ndroid	**Android-HP**	**Android-X**	**Android-Plus**
	HIGH POTENCY	EXTRA HIGH POTENCY	WITH HIGH POTENCY B-COMPLEX AND VITAMIN C
h yellow tablet contains:	*Each red tablet contains:*	*Each orange tablet contains:*	*Each white tablet contains:*
yl Testosterone ..2.5 mg.	Methyl Testosterone ..5.0 mg.	Methyl Testosterone .12.5 mg.	Methyl Testosterone ..2.5 mg.
oid Ext. (1/6 gr.) ..10 mg.	Thyroid Ext. (½ gr.) ...30 mg.	Thyroid Ext. (1 gr.) ....64 mg.	Thyroid Ext. (¼ gr.) ...15 mg.
amic Acid ....50 mg.	Glutamic Acid ....50 mg.	Glutamic Acid ....50 mg.	Ascorbic Acid (Vit. C) .250 mg.
mine HCL ....10 mg.	Thiamine HCL ....10 mg.	Thiamine HCL ....10 mg.	Thiamine HCL ....25 mg.
e: 1 tablet 3 times daily.	*Dose:* 1 tablet 3 times daily.	*Dose:* 1 or 2 tablets daily.	Glutamic Acid ....100 mg.
ilable:	*Available:*	*Available:*	Pyridoxine HCL ....5 mg.
les of 100, 500, 1000.	Bottles of 100, 500, 1000.	Bottles of 60, 500.	Niacinamide ....75 mg.
			Calcium Pantothenate .10 mg.
			Vitamin B-12 ....2.5 mcg.
			Riboflavin ....5 mg.
			Dose: 2 tablets daily.
			Available: Bottles of 60, 500.

REFER TO PDR

Contraindications: Android is contraindicated in patients with prostatic carcinoma, severe cardiorenal disease and severe persistent hypercalcemia, coronary heart disease and hyperthyroidism. Occasional cases of jaundice with plugging biliary canaliculi have occurred with average doses of Methyl Testosterone. Thyroid is not to be used in heart disease and hypertension.

Warnings: Large dosages may cause anorexia, nausea, vomiting abdominal pain, diarrhea, headache, dizziness, lethargy, paresthesia, skin eruptions, loss of libido in males, dysuria, edema, congestive heart failure and mammary carcinoma in males.

Precautions: If hypothyroidism is accompanied by adrenal insufficiency the latter must be corrected prior to and during thyroid administration.

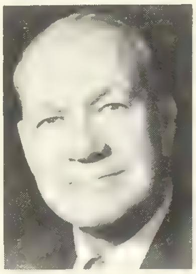
Adverse Reactions: Since Androgens, in general, tend to promote retention of sodium and water, patients receiving Methyl Testosterone, in particular elderly patients, should be observed for edema.

Hypercalcemia may occur, particularly in immobilized patients: use of Testosterone should be discontinued as soon as hypercalcemia is detected.

References: 1. **Montesano, P., and Evangelista, I.** Methyltestosterone-thyroid treatment of sexual impotence. Clin Med 12:69, 1966. 2. **Dublin, M. F.** Treatment of impotence with methyltestosterone-thyroid compound. West Med 5:67, 1964. 3. **Titeff, A. S.** Methyltestosterone-thyroid in treating impotence. Gen Prac 25:6, 1962. 4. **Hellman, L., Bradlow, H. L., Zumoff, B., Fukushima, D. K., and Gallagher, T. F.** Thyroid-androgen interrelations and the hypocholesteremic effect of androsterone. J Clin Endocr 19:936, 1959. 5. **Farris, E. J., and Colton, S. W.** Effects of L-thyroxine and liothyronine on spermatogenesis. J Urol 79:863, 1958. 6. **Osol, A., and Farrar, G. E.** United States Dispensatory (ed. 25). Lippincott, Philadelphia, 1955, p. 1432. 7. **Wershub, L. P.** Sexual Impotence in the Male. Thomas, Springfield, Ill., 1959, pp. 79-99.

for literature and samples: BROWN **THE BROWN PHARMACEUTICAL CO., INC.** 2500 West 6th Street, Los Angeles, California 90057

In memoriam



Doctor Walls

Arch Walls, MD
Kalispell, Mont.

A past president of the Michigan State Medical Society, Arch Walls, MD, died April 10 at the age of 76. He had practiced 35 years in the Detroit area.

Doctor Walls was MSMS president in 1965 and served as president of the Wayne County Medical Society in 1951-52. He was former director of Michigan Blue Shield, former chief of staff at Mt. Carmel Mercy Hospital in Detroit, and was one of the founders of the American Academy of General Practice. He served as board chairman of AAGP for several years.

A generalist, Doctor Walls was known as an advocate of personalized medicine. He saw the family doctor as the guardian of American health. After his election as MSMS president, he called for "more emphasis on bedside treatment. That would bring a closer and better understanding between patient and physician," he said.

Doctor Walls lived in Birmingham before moving to Montana in 1966. He continued to practice medicine there and was on the staff of Kalispell General Hospital until his death.

A. Barroso-Bernier, MD
Escanaba

Adalberto Barroso-Bernier, MD, general practitioner in Nahma and Manistique for 24 years, died March 24 in Bogota, Columbia, while visiting his family. Doctor Barroso-Bernier retired in 1967 and moved to Escanaba.

He was a graduate of Cornell University School of Medicine and was a former instructor at New York University. He practiced in Barracquilla, Columbia for four years before returning to the United States in 1943.

Doctor Barroso-Bernier was a member of the American College of General Practice and was a past president of the Delta-Schoolcraft Medical Society.

(Continued on Page 578)

Specialized Service

IN

PROFESSIONAL LIABILITY INSURANCE

is a high mark of distinction

THE

MEDICAL PROTECTIVE COMPANY

FORT WAYNE, INDIANA

Professional Protection Exclusively since 1899

DETROIT OFFICE: R. K. Wind and J. K. Galloway, Representatives
27200 Lahser Road, Southfield 48075, Telephone: (Area Code 313) ELgin 3-4848 or 444-1439

GRAND RAPIDS OFFICE: G. J. Haworth, Representative
422 Federal Square Building, Grand Rapids 49502 Telephone: 616-454-4477

When Constipation is a Concern . . .

Consider

DOXIDAN® The Logical Laxative

(laxative with stool softener)

Doxidan relieves constipation:

- **gently**—minimal laxative side effects
- **predictably**—overnight results
- **conveniently**—one or two capsules at bedtime
- **economically**—costs less per effective daily dose*

Composition: Each capsule contains 50 mg. danthron N.F. and 60 mg. dioctyl calcium sulfosuccinate. Supplied: Bottles of 30, 100 (FSN 6505-074-3169) and 1000 (FSN 6505-890-1247) and Unit Dose 100's (10 x 10 strips).

*based on actual drug store survey of prescribed dosages

HOECHST
PHARMACEUTICAL CO.
Somerville, N.J. 08876 U.S.A.

C-168

Thorazine®
brand of chlorpromazine
versatility
quality
experience
NOW THERE'S PRICE
Smith Kline & French Laboratories SK&F

You can't fell a redwood with a hatchet

With vitamins, too, relative needs determine the choice.

A low potency vitamin formula may be "a good thing." But when the need for vitamins is great, only a *high potency formula* will do.

THERAGRAN is often indicated as a high potency vitamin formula pre- and postoperatively, and in many patients with: arthritis, diabetes, pancreatitis, infectious disease, hepatic disease, cardiac disease, degenerative disease, osteoporosis, alcoholism, dermatologic conditions, psychiatric disorders, malabsorption syndrome, peptic ulcer, ulcerative colitis, other gastrointestinal disease, and during the menopause. Also available with minerals as THERAGRAN-M.

Theragran®

High Potency Vitamin Formula

Theragran®-M

High Potency Vitamin Formula with Minerals

THERAGRAN TABLETS AND LIQUID CONTAIN 600% OF THE MINIMUM DAILY ADULT REQUIREMENT OF VITAMIN C.

SQUIBB

The Priceless Ingredient of every product is the honor and integrity of its maker.™

© E. R. Squibb & Sons, Inc. 1970

The get-up-and-go summer cold and allergy pill.

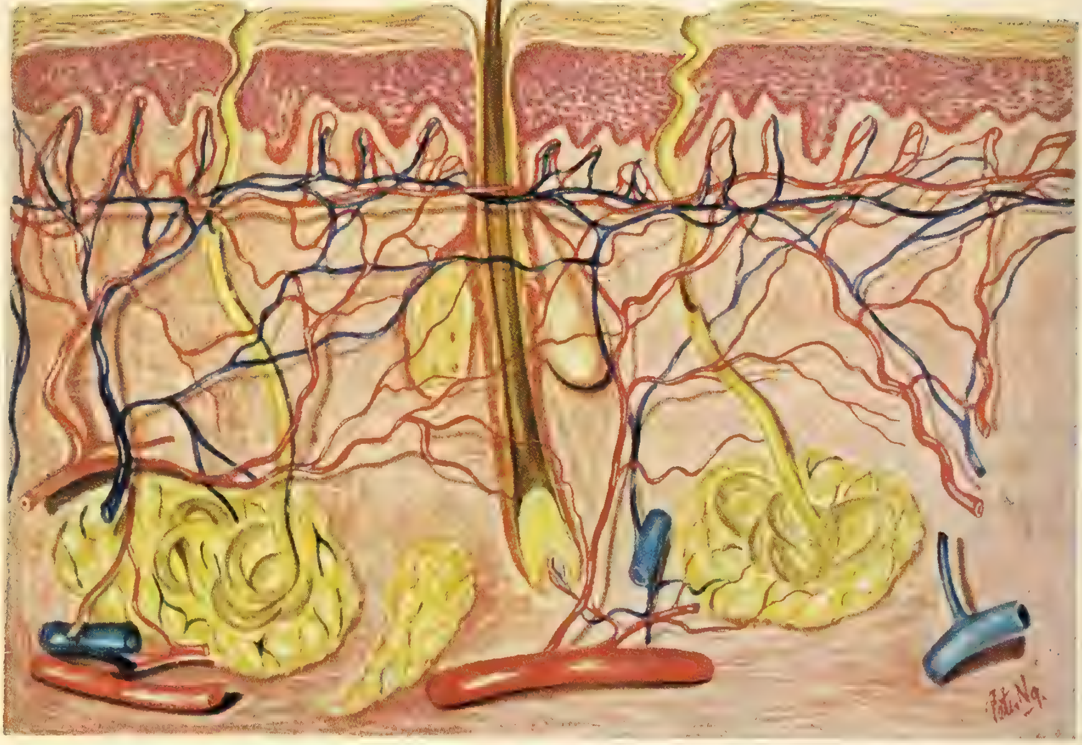
Novahistine LP can help your patients get out and enjoy themselves in spite of allergic rhinitis, hay fever or summer colds. And even when nasal congestion is caused by repeated allergic episodes, Novahistine LP can usually give prompt and long-lasting relief. These continuous-release tablets contain a vasoconstrictor-antihistamine formulation that goes to work rapidly and lasts for hours. And convenient, twice-a-day dosage lets most patients enjoy relief all day and all night. Use with caution in patients with severe hypertension, diabetes mellitus, hyperthyroidism or urinary retention. Caution ambulatory patients that drowsiness may result.

Novahistine®
LP decongestant

DOW THE DOW CHEMICAL COMPANY, Rx Pharmaceuticals, Indianapolis

(Each tablet contains 25 mg. of phenylephrine hydrochloride and 4 mg. of chlorpheniramine maleate.)

JUDGE ANTIBIOTIC OINTMENTS HERE



Results on skin are final proof of any topical antibiotic's effectiveness

No in vitro test can duplicate a clinical situation on living skin. 'Neosporin' (polymyxin B—bacitracin—neomycin) Ointment has consistently proven its effectiveness in thousands of cases of bacterial skin infection. The spectra of the three antibiotics overlap in such a way as to provide bactericidal action against most pathogenic bacteria likely to be found topically. Diffusion of the antibiotics from the special petrolatum base is rapid since they are insoluble in the petrolatum, but readily soluble in tissue fluids. The Ointment is bland and nonirritating.

Caution: As with other antibiotic preparations, prolonged use may result in overgrowth of nonsusceptible organisms and/or fungi. Appropriate measures should be taken if this occurs. Articles in the current medical literature indicate an increase in the prevalence of persons allergic to neomycin. The possibility of such a reaction should be borne in mind.

Contraindications: This product is contraindicated in those individuals who have shown hypersensitivity to any of its components.

Supplied: Tubes of 1 oz., ½ oz. with applicator tip, and ⅛ oz. with ophthalmic tip.

Complete literature available on request from Professional Services Dept. PML.

'NEOSPORIN'®

brand

POLYMYXIN B-BACITRACIN-NEOMYCIN

OINTMENT

BURROUGHS WELLCOME & CO. (U.S.A.) INC., Tuckahoe, N.Y.

U.S.S.R.
CHINA
INDIA
SAIGON
INDONESIA
AUSTRALIA

"Around the World in 80 Days"...

. . .An expense-paid trip with one hitch --
a 60-day hitch in a South Viet Nam civilian hospital delivering vitally needed medical care to the people of South Viet Nam.

American physicians are urgently needed, especially general practitioners, general surgeons, internists, ophthalmologists, orthopedic surgeons, pediatricians, and preventive medicine specialists.

For further information please write to:

Program Director
Volunteer Physicians for Viet Nam
American Medical Association
535 North Dearborn Street
Chicago, Illinois 60610

in stable adult diabetes, if diet alone fails...

start with DBI®-TD (phenformin HCl)

timed-disintegration capsules 50 mg.

A Distinctive Oral Hypoglycemic

---

a biguanide... not a sulfonylurea

Lowers elevated blood sugar without increasing endogenous insulin secretion.

Probably, secondary to its hypoglycemic effect, decreases insulin oversecretion. This may help to reduce lipogenesis and facilitate lipolysis, which may account for the clinically reported loss of excess body weight and lowering of elevated serum cholesterol levels in overweight, hypercholesteremic, stable adult diabetics unresponsive to diet alone.

DBI®-TD

(phenformin HCl)

timed-disintegration capsules 50 mg.

lowers elevated blood sugar

How to prescribe DBI®-TD (phenformin HCl)

To start with DBI-TD

Week 1	1 capsule with breakfast may be effective, or a second capsule may be given with the evening meal.
Week 2	Continue effective DBI-TD dosage. If necessary, add an additional capsule to the A.M. or P.M. dose.
Thereafter	Continue effective DBI-TD dosage.

To transfer from sulfonylurea therapy to DBI-TD alone: The first week, withdraw sulfonylurea; start with DBI-TD as indicated in the chart.

To transfer from sulfonylurea therapy to combined therapy with DBI-TD: The first week, continue dosage of sulfonylurea; add DBI-TD as indicated in the chart. When effective regulation of diabetes is attained, sulfonylurea may be reduced and/or withdrawn.

Indications: Stable adult diabetes mellitus; sulfonylurea failures, primary and secondary. **Contraindications:** Diabetes mellitus that can be regulated by diet alone; juvenile diabetes that is uncomplicated and well regulated on insulin; acute complications of diabetes (metabolic acidosis, coma, infection, gangrene); surgery; severe hepatic disease; renal disease with uremia; cardiovascular collapse, after disease states associated with hypoxemia. **Warning:** Use during pregnancy is to be avoided. Until adequate data on the effects of DBI on the human fetus are available, such use can be considered experimental. **Precautions: Starvation Ketosis,** which must be differentiated from "insulin lack" ketosis, and is characterized by ketonuria in spite of relatively normal blood and urine sugar, may result from excessive DBI therapy, excessive insulin reduction or insufficient carbohydrate intake. Adjustment of DBI-TD or insulin dosage, or supplying carbohydrates, alleviates this state. DO NOT GIVE INSULIN WITHOUT FIRST CHECKING BLOOD AND URINE SUGARS. **Lactic Acidosis:** DBI is not recommended in the presence of azotemia or in any clinical situation that predisposes to sustained hypotension that could lead to lactic acidosis. To differentiate lactic acidosis from ketoacidosis, it is recommended that periodic determinations of ketones in the blood and urine be made in diabetics previously stabilized on DBI, or DBI and insulin, who have become unstable. If electrolyte imbalance is suspected, periodic determinations should also be made of electrolytes, pH and the lactate-pyruvate ratio. DBI should be withdrawn and insulin, when required, and other corrective measures instituted immediately upon the appearance of any metabolic acidosis. **Hypoglycemia:** Although hypoglycemic reactions are rare when DBI is used alone, every precaution should be observed during the dosage adjustment period particularly when insulin or a sulfonylurea has been given in combination with DBI. **Adverse Reactions:** Principally gastrointestinal, occurring more often at higher dosage levels; unpleasant metallic taste, continuing to anorexia, nausea and, less frequently, vomiting and diarrhea. Reduce dosage at first sign of these symptoms. In case of vomiting, DBI should be immediately withdrawn. Although rare, urticaria and gastrointestinal symptoms following excessive alcohol intake have been reported. **Dosage:** 1 to 3 DBI-TD 50 mg. capsules daily. **FSN 6505-724-6331.** **Also Available:** DBI tablets 25 mg. **Supplied:** Bottles of 100 and 1000.

USV PHARMACEUTICAL CORP., Tuckahoe, N.Y. 10707 USV

Julius Y. Burnstine, MD
Southfield

A Southfield general practitioner for almost 60 years, Julius Yale Burnstine, MD, died March 27 at the age of 80.

Doctor Burnstine was a graduate of the Detroit College of Medicine and had practiced since 1912. He was affiliated with Park General, Detroit Memorial, Coventry, Harper and Grace Hospitals of Detroit. He had been a member of the membership committees of both the Wayne County and Michigan State Medical Societies.

Larry M. Farnam, MD
Grosse Pointe Park

Larry Mathew Farnam, MD, Detroit-area surgeon and general practitioner for 16 years, died April 21 at the age of 63.

Doctor Farnam was a graduate of the University of Oklahoma school of medicine and was affiliated with Bon Secours and Deaconess hospitals. He also was medical director of St. Anne's Convalescent Home.

J. Courtney Fremont, MD
Detroit

Detroit-area surgeon for 32 years, J. Courtney Fremont, MD, died March 29 at the age of 70.

Doctor Fremont was graduated from the Detroit College of Medicine and was a member of the American College of Surgeons and the Detroit Surgical Society. He was affiliated with Detroit Memorial and St. John hospitals.

Harold E. Fulton, MD
Port Huron

Harold Embree Fulton, MD, Port Huron radiologist and former chief of staff at Mercy Hospital there, died April 10 at the age of 46.

Doctor Fulton was a past president of the St. Clair County Medical Society and was a former county deputy medical examiner. He was a member of the American Roentgen Ray Society and the Radiological Society of North America, was a fellow of the American College of Radiology and was a diplomat of the American Board of Radiology.

He was graduated from the University of Pennsylvania Medical School.

Franklin D. Johnston, MD
Ann Arbor

A retired University of Michigan cardiologist, Franklin D. Johnston, MD, died April 8 at the age of 70. A professor of internal medicine and former director of the University Hospital Heart Station, Doctor Johnston retired in 1969 after 37 years with the hospital.

Doctor Johnston was a former instructor in electrical engineering at the U-M and then earned his medical degree in 1929. Along with the late Frank N. Wilson, MD, Doctor Johnston conducted basic electrocardiogram experiments in the 1930s that still are considered the basis for established ECG techniques.

Doctor Johnston was a member of the American Society for Clinical Investigation, and the Central Society for Clinical Research and was a past president of the National Association of University Cardiologists. He received the James B. Herrick Award of the American Heart Association.

Arthur W. Newitt, MD
Lansing

Arthur Wilmot Newitt, MD, former director of the Ingham County Health Department from 1957 to 1966 and consultant since to the Michigan Department of Public Health, died April 10 at the age of 77.

Doctor Newitt was in private practice in Birmingham from 1919-1931, following his graduation from Detroit College of Medicine and Surgery. Since 1931 he had been a full-time public health official, having obtained his master of public health degree in 1939 from Johns Hopkins University. He was in active duty in the U.S. Public Health Service from 1942 to 1957, when he retired with the rank of medical director.

Doctor Newitt was a fellow of the American Public Health Association and of the American College of Preventive Medicine, and was a member of the Michigan Health Officers Association, the Michigan Public Health Association and the Commissioned Officers Association.

Everett L. Phelps, MD
Hastings

Everett Leonard Phelps, MD, retired Hastings general practitioner, died March 16 at the age of 64. He was a past president of the Barry County Medical Society.

Doctor Phelps, a graduate of Temple University medical school, practiced from 1938 to 1943 in Clarksville before going to Hastings. He retired in 1966.

Doctor Phelps served with the Barry County Selective Service Board and the Barry Cancer Detection Center. He was affiliated with Pennock Hospital in Hastings.

John Ten Have, MD
Grand Rapids

John Ten Have, MD, Grand Rapids physician for 45 years, died April 4 at the age of 75.

Doctor Ten Have was a graduate of the University of Michigan Medical School and began general practice in Grand Rapids in 1926. He was a member of the Butterworth Hospital staff and the American Academy of General Practice.

Preston J. van Kolken, MD
Grand Haven

Preston J. van Kolken, MD, Grand Haven general practitioner since 1948, died April 2 at the age of 58.

Doctor van Kolken was a graduate of the University of Chicago medical school, and was a former chief of staff at North Ottawa Community Hospital. He retired in 1969 because of ill health.

Doctor van Kolken practiced one year in Kentucky early in his career, and was assigned by the Presbyterian Church for seven years' of service as a medical missionary in Africa. He also served as chief of medicine at the American hospital in Pago Pago, Samoa.

Charles J. Waszak, MD
Troy

Charles J. Waszak, MD, long-time Detroit-area physician, died April 6 at the age of 63.

Doctor Waszak was a graduate of the University of Michigan Medical School and had been a member of the Providence Hospital staff for 40 years. He also served on the Mt. Carmel Mercy Hospital staff.

Clarence Gillette, MD
Niles

Clarence Gillette, MD, long-time Niles-area physician and banker, died April 17 at the age of 85. He was a surgeon.

Doctor Gillette was graduated from the University of Michigan Medical School and was affiliated with Pawating Hospital in Niles and Lee Memorial Hospital in Dowagiac. He had served from 1910-1925 in Bronson and Borgess hospitals in Kalamazoo.

Doctor Gillette was a member of the board of directors and former board chairman of the First Federal Savings and Loan Association of Niles.

Melissa H. Worth, MD
Ypsilanti

An allergy specialist who practiced in Ypsilanti for 39 years, Melissa Hazel Worth, MD, died April 21 at the age of 80.

A graduate of the University of Michigan, Doctor Worth had been in active practice until February. She was affiliated with Beyer Memorial Hospital in Ypsilanti.

William S. Chapin, MD
Spring Lake

Muskegon area physician for the past 50 years, William S. Chapin, MD, died April 18 at the age of 89.

Doctor Chapin was honored by MSMS and the Muskegon County Medical Society for his more than 50 years of service to the state. He served for a time as physician for the Muskegon County jail.

Doctor Chapin was born in Peking, China, and was a graduate of the University of Michigan Medical School.

Frederick A. Lauppe, MD
Grosse Pointe Farms

Frederick A. Lauppe, MD, Detroit ophthalmologist for more than 35 years, died April 22 at the age of 66.

An associate professor of ophthalmology at Wayne State University School of Medicine, Doctor Lauppe was chief of ophthalmology at the Veterans Administration Hospital in Allen Park.

A graduate of the University of Michigan Medical School, he was a past president of the Michigan Ophthalmology Society. He belonged to the Detroit Ophthalmological Society and Detroit Ophthalmological Club.

20,000 MDs qualify for AMA recognition

The AMA reports that more than 20,000 U.S. physicians have received its Physician's Recognition award, established in 1969 to honor doctors' participation in continuing medical education.

The Physician's Recognition Award is given for a minimum of 150 credit hours earned over a continuous three-year qualifying period. At least 60 hours are required credits of formal education courses, teaching or publications; the rest are elective.

The MSMS Committee on Postgraduate Medical Education encourages all MSMS members to apply voluntarily for the award, on the basis that "each physician has a responsibility to update and expand his basic core of information."

Classified Advertising

$5.00 per insertion of 50 words or less, with an additional 10 cents per word in excess of 50.

NEW EXPANDING OPPORTUNITIES for family physicians and physicians specializing in pediatrics, internal medicine, anesthesiology, in medically awakening community. Contemporary, automated, 110 bed new hospital opening March 1, 1971. Patient service area 50,000 people. Medical staff leading and supporting recruitment efforts. Excellent community location, 40 miles equidistant to Milwaukee and Madison, Wisconsin. Complete educational, cultural and recreational facilities. New medical dental building and 130 bed skilled hospital care nursing home being constructed adjacent to the new hospital ready for occupancy in the Spring of 1971. Immediate satisfaction in practice, income and family living. Special assistance if needed. Write or call Dr. Paul R. Glunz, Watertown Memorial Hospital, Watertown Area Health Care Center, Watertown, Wisconsin 53094. Tel: (414) 261-4210 for more information.

BEAUTIFUL GUAM IN THE PACIFIC: 3 physicians wanted: Preferably internists or general pactitioners. 2 year civil service contract, stipend $17,800-$36,000 per year negotiated; transportation, paid vacation, paid visits to post-graduate studies, subsidized housing. For information and interview; R. Craig Barlow, M.D., St. Joseph Mercy Hospital, Ann Arbor, Michigan 48104.

GENERAL PRACTITIONERS — Community of Mt. Pleasant, Michigan desirous of securing 4 general practitioners. Good hospital privileges available. 125 bed, fully accredited. Excellent consultants available in community. Mixed M.D., D.O. Staff. Active staff of 28 physicians. Community of 22,000. Site of Central Michigan University, 14,500 students. Four season area. Metropolitan areas within 50 miles. Service area of 75,000. Five G.P.'s in active practice. Community will assist actively in helping you get established. Call collect R. E. Pieratt, Adm. (517) 773-7941 or Frank Johnson, M.D., Chairman Recruitment Committee, area (517) 772-4846.

RADIOLOGY LOCUMS WANTED—Board Certified Radiologist, Univ. trained, including arteriography and isotopes, Michigan licensed, presently Fellow at Toronto Hospital for Sick Children, desires summer 1 week locums (or 2 if resort area where family might vacation). Call Dr. C. Fitz (416) 922-0928.

ANN ARBOR-YPSILANTI AREA: Unique opportunity to practice general medicine in university affiliated hospital serving S.E. Michigan. Current staff includes surgeon, internist, pediatrician, three greneral practitioners, plus psychiatrists and residents. Salary range $25,035, plus liberal Michigan Civil Service fringe benefits. Michigan licensure required. Contact W. J. Bogard, M.D., Director, Division of Clinical Services and Gerontology, Ypsilanti State Hospital, Box A, Ypsilanti, Michigan 48197. An equal opportunity employer.

GENERAL SURGEON—for practice in Eagle River, Wis., famed northern Wisconsin year around vacation community. Offering new 40 bed hospital, completely equipped for general, orthopedic surgery, X-ray, lab and physical therapy depts. Staff: 5 Gen. Prac., Ob-Gyn Dr., radiologist. Hospital attractively located adjacent to golf course and near chain of 28 lakes. Ideal family living without pressures. Unlimited recreational opportunities in fishing, boating, snowmobiling, skiing, hunting. Over 1300 lakes in county, trout streams. Exc. schools, college nearby. Nearby metropolitan centers accessible by airlines. Pop. immediate area 8,000, year around, 25,000 summers. Contact Bob Satran, Eagle River, Wisconsin. Phone (715) 479-4422.

ANESTHESIOLOGIST—to join one full time anesthesiologist. Mid-Michigan community of 20,000. University of 14,000. Rural and resort area. Lakes and ski hills within 15 minutes. Two main expressways with easy access. Near several large metropolitan areas. Hospital, 125 beds, with 80 bed extended care facility. JCAH approved. Hospital has two full time pathologists, a full time radiologist. Medical staff of 30 men with 65% specialists. Open financial arrangements. Contact: R. E. Pieratt, Administrator (517) 773-7941.

EMERGENCY ROOM PHYSICIAN: 16 man group in Green Bay, Wisconsin establishing Emergency Room Department. Positions available. Salary open with available stockholder arrangement. Contact C. G. Novotny, M.D., West Side Clinic, Green Bay, Wisconsin 54303.

OFFICE SPACE: Grand Haven, Michigan, located on Lake Michigan. A clean progressive city with steady diversified employment, new hospital—the best school system. A fine place to start your practice and raise your family. Office is located in the most convenient and desirable location, to be divided to suit the tenant. Phone (616) 842-6530 or (616) 842-4939 evening. OR WRITE: Beacon Professional Building, Beacon Blvd., Grand Haven, Michigan 49417.

LOCUM TENENS—August and September 1971. Family practice in Modern Clinic Building adjacent to new small hospital. Contact: Robert Painter, M.D., Grant, Michigan. Phone: (616) Office 834-5644, Home 834-5648.

PHYSICIAN: For staff position in a 216 bed modern progressive general hospital in beautiful residential community. Salary dependent upon qualifications. Excellent fringe benefits. Must be licensed to practice in a State, Territory, or Commonwealth of the United States or in the District of Columbia. Nondiscrimination in employment. Contact Hospital Director, Veterans Administration Hospital, Fort Wayne, Indiana 46805.

TRAVERSE CITY

A CARPET OF PINE NEEDLES
surrounds this handsome 1969 house designed by architect Roger Hummel for a couple who wanted to live in their grove of magnificent white pine trees overlooking the West Bay. Sophisticated open plan with splendid expanses of glass fits the site perfectly, gives picture views from every room (almost like a tree house) but with a wonderful sense of privacy. Planned for people who do not care to spend all their time on yard and housework, everything needed for comfortable, relaxed, easy living is here, with absolutely minimum maintenance work and expense: no storm sash, no paint, no eavestroughs, no lawn, no lawnmower. (The beauty around here doesn't need to be manicured!) Plenty of bookshelves, adequate storage for everything you like to collect, save or use. Large, well lighted room (20x30) with finished oak floor for shop, studio or any hobby or recreation activity you can think of. There is no way to start from scratch and achieve a house like this in a hurry, but you can save 18 months of searching, planning, careful attention to construction as well as whatever inflation has done to prices since 1969 if this house fits you. Price $125,000. Send for pictures and blueprints which owner will lend you. Better yet, come and see.

James Stephen, Attorney
308 East Front
Traverse City, Mich. 49684
616-946-8630
Evenings & Weekends 616-946-4134

HOSPITAL PLANNING INC.
Alco Universal Building
East Lansing, Michigan
48823
517 332-1333

PROFESSIONAL PERSONNEL RECRUITMENT FOR HOSPITALS & CLINICS

Administrators, Physicians, Dept. Heads

PHYSICIANS — ALL SPECIALTIES

At no financial obligation, let us present your resume to our clients. As Planning & Personnel Consultants, we serve fine Hospitals, Clinics, Universities, and Health Planning Agencies in the Great Lakes Region. We advise physician candidates in depth about a variety of the best opportunities available to assist in making the best decisions.

WANTED: INTERNIST-CARDIOLOGIST

Searching for Internist-Cardiologist to join small multi-specialty group in Northern Michigan. Direct new hospital coronary care unit. New office building located next to hospital. Congenial group. Plenty of parking. Enjoy quiet, clean, small town living and practice your specialty. Send resume or call Arthur A. Lepinot.

Con-
ven-
ience!

Dicarbosil®
ANTACID

Your ulcer patients and others will praise it. Specify DICARBOSIL 144's—144 tablets in 12 rolls.

ARCH LABORATORIES
319 South Fourth Street, St. Louis, Missouri 63102

Index to Advertisers

American Medical Assoc. 575
American Services International 560
Arch Laboratories 581
Armour Pharmaceutical Co. 548, 549
Arnar-Stone Laboratories, Inc. 555
Brown Pharmaceuticals 567
Burroughs-Wellcome & Co. 574
Campbell Soup Co. 543
Classified Advertising 580
David Whitney Bldg. 554
Dow Chemical Co. 572, 573
Fisher Building 558
Geigy Pharmaceuticals 512
Hoechst Pharmaceuticals 569
Homemakers, Inc. .... Cover III
Hospital Planning, Inc. 581
Import Motors 561
Ingram Co., G.A. 562
Lilly, Eli & Co. 524
Mead Johnson Laboratories 518, 519
Medical Protective Co. 568
Mercywood Hospital 566
Michigan State Medical Society 517
North Detroit General Hospital 582
Riker Laboratories 551
Roche Laboratories .... Cover II, 511, 559, Cover IV
Searle, G.D. & Co. 544, 545
Smith, Kline & French Laboratories 570
Squibb, E. R. & Sons 571
Stratton, Ben P., Agency 521
Stuart Pharmaceuticals, Div. of
  Atlas Chem-Ind., Inc. 552, 553
Upjohn Company 522, 523, 546
U. S. V. Pharmaceutical 576, 577
Walker Corp. and Co. 556, 557
Warner-Chilcott Laboratories 564, 565

POST GRADUATE COURSE
on
INTESTINAL OBSTRUCTION
and
THE USE OF INTESTINAL DECOMPRESSION TUBES

Directed by

Meyer O. Cantor, M.D., M.S., F.A.C.S., F.A.C.G.
and associates at North Detroit General Hospital
Detroit, Michigan

July 22, 23, 24, 1971

This course is designed to present in depth a complete presentation of all phases of intestinal obstruction as practiced in 1971. Fluid and electrolyte requirements, pulmonary physiology, cardiac complications, and the recent use of neurolept anesthesia in the treatment of the poor risk obstructed patient will all be presented in detail.

The diagnosis of intestinal obstruction, clinical as well as radiological, and its treatment will be detailed. Ileus will be comprehensively studied.

The use of all types of intestinal decompression tubes will be discussed in detail with special attention being given to the use of the CANTOR TUBE. Indications, contra-indications and the complications will be presented.

For further information and registration write to: Mr. Monroe M. Title, Administrator, North Detroit General Hospital, 3105 Carpenter, Detroit, Mich. 48212. Fee: $100 made payable to "North Detroit General Hospital."

Michigan doctors have a final chance to take part in the MSMS Survey on Trends in the Overhead Costs of Medical Practice printed here. If you have not already done so with the mailing made to all MSMS members, fill out this form, detach it and mail it to the MSMS Bureau of Economic Information, MSMS Headquarters, 120 W. Saginaw, East Lansing, 48823.

As MSMS President Harold H. Hiscock, MD, points out: "The survey is an important step in providing MSMS with the comprehensive economic data. At the present time we must rely on the information of others. The key to obtaining useful information is your participation."

CLIP ALONG THIS LINE

Survey
Trends in Overhead Cost of Medical Practice
April 1971

Instructions:

1. If you are a member of a group please be certain only **ONE** questionnaire is submitted. It should contain information for the entire group.
2. If you are employed directly by the government, an institution or industry, please complete at least Parts I and II. Completion of Part III, financial information, is optional.
3. The **ANONYMOUS** nature of this questionnaire eliminates the possibility of follow-up for the purpose of clarifying answers. Consequently, we ask that you submit information according to the requested format.

I. PRACTICE CHARACTERISTICS

A. CHECK THE BOX WHICH BEST FITS THE LEGAL FORM OF THIS PRACTICE.	1966	1970
1. PROFESSIONAL CORPORATION	☐	☐
2. SOLE PROPRIETORSHIP	☐	☐
3. PARTNERSHIP	☐	☐
4. SALARIED EMPLOYEE (check if employed by the Government, an institution, or industry. Do not check if your salary is from your professional corporation).	☐	☐

B. IF YOU ARE DIRECTLY EMPLOYED AS IN A. 4 ABOVE, PLEASE STATE THE TYPE OF ORGANIZATION YOU ARE EMPLOYED BY____________________ AND YOUR ANNUAL SALARY IN 1966 $__________ AND 1970 $__________.

C. HOW MANY PHYSICIANS WERE IN THIS PRACTICE IN 1966 ________ 1970________ (include stockholders, partners, and sole proprietor physicians only. Do not include physician employees.)

D. HOW MANY PHYSICIANS WERE CONSIDERED SALARIED EMPLOYEES AND HAD NO OWNERSHIP INTEREST? 1966________ 1970________

E. IN WHAT COUNTY WAS THIS PRACTICE LOCATED ON DECEMBER 31, 1970? ____________________

II. PHYSICIAN CHARACTERISTICS

IF THIS IS A SOLO PRACTICE, ANSWER AS IF YOU WERE PHYSICIAN (1). IF THERE IS MORE THAN ONE PHYSICIAN IN THIS PRACTICE, ASSIGN A NUMBER TO EACH.

A. INDICATE THE MEDICAL SPECIALTY IN WHICH YOU SPEND MORE THEN 50% OF YOUR PRACTICE TIME. CONSIDER GENERAL PRACTICE AS A SPECIALTY.

PHYSICIAN (1) ______ (2) ______ (3) ______

(4) ______ (5) ______ (6) ______

B. HOW MANY HOURS DO YOU PRACTICE EACH WEEK?

PHYSICIAN (1) ______ (2) ______ (3) ______

(4) ______ (5) ______ (6) ______

C. WHAT IS YOUR AGE?

PHYSICIAN (1) ______ (2) ______ (3) ______

(4) ______ (5) ______ (6) ______

D. OF WHAT COMPONENT COUNTY MEDICAL SOCIETY ARE YOU A MEMBER? ______

III. FINANCIAL INFORMATION

USE INFORMATION FOR YEARS ENDED DECEMBER 31, 1966 and 1970 OR NEXT EARLIER FISCAL YEAR. IF DATA REPRESENTS A PARTIAL FISCAL YEAR, INDICATE THE NUMBER OF MONTHS INCLUDED.

PLEASE USE THE EXPENSE CATEGORIES AS LISTED:

	1966	1970
A) GROSS REVENUE FROM MEDICAL PRACTICE	$	$
B) OPERATING EXPENSES:		
1) SALARIES: a) PHYSICIANS-OWNER HOW MANY 1966______ 1970______		
b) PHYSICIAN EMPLOYEES HOW MANY 1966______ 1970______		
c) NON-PHYSICIAN EMPLOYEES HOW MANY 1966______ 1970______		
2) PAYROLL TAXES AND EMPLOYEE FRINGE BENEFITS (F.I.C.A., unemployment taxes, hospitalization, bonuses and non-owner pension)		
3) PHYSICIANS (owner) PENSION COSTS		
4) DRUGS, MEDICAL SUPPLIES, AND LABORATORY FEES		
5) OCCUPANCY, EQUIPMENT AND OFFICE EXPENSE (include rentals, depreciation, property taxes, utilities, telephone maintenance, office supplies, postage, laundry.)		
6) INSURANCE (professional & general liability, fire and business insurance) DO NOT INCLUDE LIFE INSURANCE		
7) AUTOMOBILE EXPENSE (auto lease, depreciation, gas, maintenance)		
8) OTHER EXPENSES (donations, conventions, dues, journals, entertainment, legal and accounting fees, and locum tenens).		
9) CORPORATE INCOME TAX (does not apply to solo practitioners or partnerships)		
TOTAL OPERATING EXPENSES		
NET INCOME FROM PRACTICE	$	$

Michigan Medicine
Breaking News: Deadline, June 3
June 1971, Volume 70, Number 13
Michigan State Medical Society

MSMS surveys of overhead costs coming in to headquarters

Approximately 1,000 of the MSMS surveys on the overhead costs of physicians' practices have been completed by MSMS members and returned to MSMS headquarters.

Further cooperation of MSMS members is urged by the Committee on Medical Socio-Economics and the Bureau of Economic Information, who have prepared the study and are now collecting the finished forms.

The forms were mailed April 19 to all MSMS members. A second opportunity to fill out the form is available to all MSMS members through the tear-out form printed on pages 583 and 584.

Nominations invited for House of Delegates Certificates

The deadline is July 1 for nominations in the presentation of 1971 MSMS Certificates of Commendation to outstanding Michigan physicians.

County medical societies have received a request to nominate one or more of their members whom they feel are distinguished in both scientific and/or public service. The biographic forms are to be filled out and mailed to the Committee on Certificates of Commendation, Box 950, MSMS, East Lansing, 48823.

Last year's recipients of MSMS's highest honor were Hira E. Branch, MD, Flint; Muir Clapper, MD, Detroit; Harold F. Falls, MD, Ann Arbor; Herbert W. Harris, MD, Lansing; Robert E. Rice, MD, Greenville, and Sarah Schooten, MD, Detroit.

Medical students preparing to take summer hospital positions

Final arrangements have been made to place nearly 50 Michigan medical students in hospitals around the state for the summer. Their orientation to medical practice in the community is sponsored by the Student American Medical Association, MSMS, and the Michigan Hospital Association. Room and board and a weekly stipend are provided to each student. In the 1970 pilot project, also arranged by MSMS, 11 students were placed. The Michigan Academy of Family Practice also has endorsed the project.

CAPSULES

Any doctor uncertain about narcotic licenses necessary now under the Federal Controlled Substances Act of 1970, effective May 1, is urged to write or phone MSMS.

* * *

The MSMS Survey of Fees (the second to be conducted by the new MSMS Bureau of Economic Information) has been mailed to all section chairmen for final review before being placed in the hands of MSMS members.

* * *

The MSMS Committee on Highway Injuries is seeking a response from the major Michigan automobile insurance carriers to the inclusion of ambulance service as a benefit in their policies. The idea was suggested at a meeting this spring of the MSMS Council, after it was learned that Blue Cross-Blue Shield could not include ambulance service under their subscriber plans.

* * *

Funds have been allocated to the seven-county Comprehensive Health Planning Council of Southeastern Michigan now that physicians and others have reached agreement on representation. A 1.2 million grant from HEW has been made for a period of five years, with funds to be matched by the Comprehensive Health Planning Council of SE Michigan.

* * *

Western Michigan University is awaiting word on its application for a $500,000 federal health manpower training grant. If the grant is approved, WMU will begin a proposed physician assistant pilot program.

The program has already had more than 800 applications.

* * *

The Western Michigan Comprehensive Health Services has turned down a $1.97 million grant from the Office of Economic Opportunity. The grant was to provide free health services to the poor of Mason, Manistee, Newaygo and

CAPSULES/Cont.

Lake Counties. The agency entered a period of negotiation after notifying the Michigan Department of Public Health and Five-CAP that the grant was not acceptable.

* * *

HEW Secretary Elliot L. Richardson has appointed Herbert A. Raskin, MD, Southfield psychiatrist, to the new National Advisory Council on Alcohol Abuse and Alcoholism. Doctor Raskin is chairman of the AMA's committee on Alcoholism and Drug Dependence, and a former chairman of the MSMS Committee on Alcohol and Drug Dependence.

* * *

Mrs. Katherine Phelan, RN, MPH, director of the Nursing Division, Oakland County Health Department, is new president of the Michigan Public Health Association. She was elected at the MPHA's 50th annual meeting in Grand Rapids in mid-May.

Other new officers are Keith McCall, PhD, Bureau of Laboratories, Michigan Department of Public Health, president-elect and Ralph Lewis, U-M Department of Postgraduate Medicine, vice president.

* * *

Beryl Blue Spruce, MD, is new medical director of the Detroit Maternal and Infant Care Project, succeeding Charles Berger, MD, chief of Michigan's Maternal Health Division, who had served as acting chairman of the DMIC project since 1969. Doctor Spruce is an instructor and consultant with the University of Michigan Medical School and the Office of Indian Opportunity.

350 physicians expected for Coller-Penberthy-Thirlby meeting

A distinguished faculty including 11 out-of-state physicians will present the program at the 51st annual Coller-Penberthy-Thirlby Medical Conference scheduled July 29 and 30 at Traverse City.

John A. Gronvall, MD, dean of the University of Michigan Medical School, will be toastmaster for the Thursday evening dinner, when John M. Nesbit, MD, Chicago, associate director of the Joint Commission on Accreditation of Hospitals, will speak.

Invited guests include T. N. Evans, MD, and Andrew D. Hunt, Jr., MD, deans, respectively, of the medical schools at Wayne State University and Michigan State University; Harold H. Hiscock, MD, Flint, MSMS president; Carl E. Badgley, MD, Ann Arbor; Harry A. Towsley, MD, Ann Arbor; Mrs. Frederick Coller and Mrs. E. L. Thirlby.

An estimated 350 physicians are expected.

Several Michigan doctors to take part in AMA convention

Several Michigan doctors will be contributing to the General Session discussions at the American Medical Association's annual convention June 20-24 in Atlantic City. They include: Charles F. Frey, MD, Ann Arbor; Alan B. Varley, MD, Kalamazoo; Chris J. D. Zarafonetis, MD Ann Arbor; Alexander J. Walt, MD, Detroit; Edwin M. Smith, MD, Ann Arbor; Herbert Kaufer, MD, Ann Arbor and John Gilroy, MD, Detroit.

E. Richard Harrell, Jr., MD, Ann Arbor will serve as secretary to the Section on Dermatology; while H. Marvin Pollard, MD, Ann Arbor, is alternate delegate to the Section of Gastroenterology. George H. Koepke, MD, Ann Arbor is secretary to the Section on Physical Medicine and Rehabilitation and Kenneth L. Krabbenhoft, MD, Detroit, is vice-chairman to the Section of Radiology.

The beautiful building designed by Minoru Yamasaki for MSMS headquarters won an award recently for the medical society from the East Lansing Aesthetics Committee. Accepting the citation, one of the first of several to be made annually by the committee, were Kenneth Johnson, MD, Lansing, MSMS secretary, and chairman of the building and site committee, and Mrs. Johnson. Said the light-hearted commendation: "We honor you, doctors of medicine, because, with this beautiful building, you have brought a dimension of true quality to our community. In short, you have given us a badly-needed shot in the arm. We thank you for this contribution to our life and learning."

MSMS group insurance policy reopening date is Aug. 1

The effective date for the annual reopening of the MSMS 94000 Group Blue Cross & Blue Shield program is August 1, 1971. During the reopening participants can make contract changes; e.g., add Blue Shield to existing Blue Cross coverage, change to Blue Cross only, add eligible dependents, etc.

Also, non-participants can join the program. Currently 256 or 5.3% of the 4,764 enrolled in the 94000 Group carry Blue Cross coverage only. At the request of the Committee on Professional Insurance Plans, the Blues have agreed to publicize this option in the literature that will be sent to MSMS members.

Gov. Milliken calls for HMOs, more physicians and assistants

Greater state control of health care, insurance and costs has been proposed for Michigan by Gov. William Milliken in a special health care message to the legislature.

Gov. Milliken asked, in mid-May, for training of more doctors and physicians' assistants, establishment of health maintenance organizations, continuing priority for community mental health treatment facilities, and a $5 million Michigan State Housing Development Authority program to provide housing for retarded adults capable of living independently.

Gov. Milliken also proposed improving health insurance and controlling costs, including a close review of the Medicaid program.

He said he has asked for a program to develop standards and enforcement mechanisms relating to the quality and cost of health care, to coordinate the planning of new hospital construction and other health care facilities, and to establish an agency with central responsibility for maximum efficiency and economy in the providing of health care.

'Medical emergencies' added to Blue Cross-Shield coverage

Coverage for "medical emergencies" has been added for subscribers to Blue Cross-Blue Shield. This is in addition to the "emergency first aid" coverage which has previously covered minor accidental injuries.

Michigan Blue Shield has provided explanatory letters to physicians to aid in answering patients' questions on the new service. Additional copies may be ordered from the Provider Services Department #93, Michigan Blue Cross-Blue Shield, 441 East Jefferson, Detroit 48226.

CAPSULES/Cont.

The W K. Kellogg Foundation of Battle Creek is supporting development of an educational program based on the new standards for accreditation of hospitals. A $278,000 grant over a three-year period is being made by the Foundation to the Joint Commission on Accreditation of Hospitals to support the new program. Purpose of the program is to help physicians, trustees, administrators and other key hospital personnel to understand and to meet their responsibilities in improving patient care through participation in the accreditation process.

* * *

Awards totalling $1,007,119 have been made to Michigan schools of medicine and dentistry under the Health Professions Special Project Grants Program of HEW. The grants are to assist schools to meet financial needs, to expand their enrollments and to shorten the length of time required for the completion of training. New awards of $435,000 and $400,000, respectively, were made to the Michigan State University College of Human Medicine and the University of Detroit School of Dentistry, while a supplement of $172,119 was provided to the University of Michigan Medical School.

* * *

Dorothy Carnegie, DO, Lansing, took office late in May as president of the Michigan Association of Osteopathic Physicians and Surgeons. She is the second woman to hold that position and succeeds Frank J. McDevitt, DO, Farmington.

* * *

A three-day physician education course in "Decision Making in Acute Coronary Care" is planned June 16-18 by the Michigan Heart Association at the Ramada Inn in Saginaw. Co-sponsor is the Michigan Academy of Family Practice. The course is approved for prescribed (Category 1) credit by the AAFP.

* * *

James L. Conklin, MD, former associate professor of anatomy and coordinator of academic counseling at the University of Michigan Medical School, is now associate dean for student affairs of the College of Human Medicine at Michigan State University. He will be responsible for student admissions, counseling and financial assistance programs.

The cooperation of Michigan physicians is asked in the identification of children with the multiple handicap of deafness and blindness. The Jackson County Intermediate School District is conducting a research study, at the request of the Special Education Division of the Michigan Department of Education, to identify the deaf-blind population under 25 years of age in Michigan. The information will be presented to the Midwest Regional Center for Services to Deaf-Blind Children located in Lansing, so that a specific plan can be developed to meet the needs of the deaf-blind children.

* * *

The Michigan PTA has elected a new president, Herbert A. Auer, manager of the MSMS Department of Communications. A former teacher and former adult educator at MSU, Mr. Auer has long been active in the PTA. He was unopposed as the nominee to head the state-wide organization of 200,000 members.

More med students than ever to enter Michigan schools in '71

A record number of freshman students will enter Michigan's three medical schools this year, with the increases coming at the Wayne State University and Michigan State University medical schools.

The total freshman enrollment at the three schools will be 516 students, with 225 planning to enter the U-M Medical School; 208 to enter WSU and 83 to enter MSU.

In the last four years, the freshman medical school enrollments have followed this pattern:

	1968	1969	1970	1971
University of Michigan	208	225	225	225
Michigan State University	26	30	40	83
Wayne State University	130	130	165	

Blue Cross-Blue Shield raise rates again July 1

As of July 1, Michigan Blue Cross-Blue Shield will be raising their rates, after authorization by the Insurance Bureau to do so. Blue Cross will raise its rates an average of 8.7 per cent, while Blue Shield will increase its rates an average of 6.3 per cent.

Doctor Bryan

Doctor Moses

1971 Scientific Session offers something for everyone

A streamlined version of the annual MSMS Scientific Session is planned for Oct. 6 and 7 at the Civic Center and Pantlind Hotel in Grand Rapids.

Two major meetings are scheduled concurrently for doctors' choosing at all times during the two-day scientific sessions, in place of the more numerous offerings of recent years. Section meetings are also planned at various times during both days.

In charge of the 1971 Scientific Session are John B. Bryan, MD, Royal Oak, coordinator of speakers, and John W. Moses, MD, Detroit, coordinator of programs.

The four postgraduate courses of previous years will not be offered.

Instead, the meetings are planned to appeal to a variety of specialists, presenting the latest techniques and knowledge in several areas of particular medical importance today.

Offerings beginning at 9 a.m. Wednesday include Treatment of Drugs and Alcohol Abuse, and The Changing Spectra of Infections. They will be followed throughout the day by Adolescence and Its Problems; UTI's—You Think It's Simple?; Heart Attack and Heart Disease Deaths; Diabetes and a Review of Tolbutamide Controversy; Hypertension; Screening for Coronary Prone; Obesity and Lipids; Sedentary Life; Diverticulitis—Medical or Surgical and Colitis—Granulomatous vs. Ulcerative—When Does It Cease To Be Medical and Become Surgical?

On Thursday, the following topics will be offered: Legalized Abortion on Demand—Is This For Medicine?; Cardiac Revascularization—Fact or Fancy; What Are Auto Immune Diseases—Is All That Glitters Gold?; Strokes in 1971—Horse and Buggy or Jet Set; The Easy (?) Identification of Diffuse Intravascular Clotting and Proper Treatment; Increased Exposure of the Population of Cancer-Causing Agents in the Environment; Fluid and Electrolyte Problems in Children.

MEDIGRAMS

LATE NEWS FROM THE MICHIGAN STATE MEDICAL SOCIETY

[illegible] 70: [illegible] 1971

U. C. SAN FRANCISCO
MEDICAL CENTER LIBRARY
DEC 21 1971

Michigan Medicine

June 18, 1971, Volume 70, Number 14
Michigan State Medical Society
Reading Time: 2 Mins, 35 Seconds

THE PRINCIPLE of Hospital Certificate of Need legislation was endorsed June 16 by the MSMS Council, which also voted "to continue study of the strengths and weaknesses of Certificate of Need legislation through an ad hoc committee which would meet with other interested organizations and report to The Council at its next meeting."

MEDICAID PAYMENTS to physicians hang in the balance for the final weeks of the current fiscal year which ends June 30. The Senate approved a $23-million Department of Social Services supplemental appropriations bill and House concurrence is technically required. Governmental insiders indicate that faith in such action may be enough to cause the release of funds to cover final 1970-71 payments. The Department of Social Services appropriations bill for 1971-72 has not been reported from the House Appropriations Committee; however a resolution might be approved to extend current payments pending the new 1971-72 budget bill.

THE MSMS delegation will be led at the AMA Annual Convention in Atlantic City, June 20-24, by Donald Sweeny, Jr., MD. The delegates met June 9 in Detroit to refine several resolutions and to discuss upcoming reports, elections, etc.

LEGISLATIVE BILLS to increase annual re-registration fees of a number of professions, including medical doctors, are being considered this week by the Senate and House Committees on State Affairs. The medical re-registration fee bill would increase the annual fee from $5 to $15, or an estimated $120,000 increase to the state. Osteopathic fees would also increase to $15. MSMS argued before the State Affairs Committee that doctors of medicine are willing to pay fees necessary to underwrite the cost of operating the Board of Registration in Medicine, but strenuously object to overcharging as a means of raising money for the state. Some legislators are attempting to amend the bills to raise fees to $100 per year.

A GP STUDY is proposed in a resolution introduced by Rep. Marvin Stempien, D-Livonia. House Concurrent Resolution 181 would create a committee composed of four House members, four Senate members, representatives of medical and osteopathic schools in Michigan, representatives of MSMS, MAOPS and the Academy of General Practice, and four members of the public "to study the problems of education and licensing of the practice of family medicine and the general practice of medicine and of securing an adequate number of family physicians." A preliminary report would be required before December 31, 1971, and a final report before December 31, 1972.

DRUG REGISTRATION DEADLINE has been extended from May 1 to July 29. Physicians who have not yet received the new number should immediately contact the Bureau of Narcotics and Dangerous Drugs, Department of Justice, 357 Federal Building, 231 W. Lafayette Avenue, Detroit, Michigan 48226. Until the new number is received, physicians may continue to use their old Internal Revenue Service number of all prescriptions, plus the notation "Federal registration applied for on (date)."

REPRESENTING MSMS at the dedication June 9 of the new Detroit Medical and Surgical Center was Sidney Adler, MD, MSMS President-Elect. Lionel F. Swan, MD, president of the National Medical Foundation, and one of the five doctors in the Center, calls the project "the nation's first medical-organization-sponsored ghetto medical center."

UNDERSTAND HMOs? The June 8 issue of the American Medical News has an extensive article.

THE MSMS DELEGATION at the dinner honoring Harry A. Towsley, MD, on the occasion of his retirement as professor and chairman of the Department of Postgraduate Medicine and as professor of pediatrics at the U-M Medical School was led June 8 by Harold H. Hiscock, MD, MSMS president.

THE MSMS doctor-of-the-week program in the Michigan Legislature has been completed for the current session. Eighteen doctors spent a week with the legislature in the project which was recently praised in Medical Economics. Plans are being made for the fall program and volunteers are being sought for October and November. Interested physicians should contact the MSMS Department of Government Relations.

ACTION TO ORGANIZE formally was taken June 9 by representatives of Michigan medical specialty organizations when they met for the fifth time at MSMS. The organization will work to improve two-way communications between the MSMS Council and the specialties. The group elected Glenn Moore, MD, Flint, as moderator, and asked MSMS President Hiscock to serve as advisor.

THE FIRST FULL-PAGE AMA ad appears in the June 4 issue of Life magazine as part of new communications effort to "educate the public about good health and to create a public climate more receptive to medicine." Other ads appear later in Ebony, Reader's Digest, and newspapers, including the June 9 New York Times.

HEW UNDERSECRETARY VENEMAN said recently that "The Administration, AMA, and Kennedy proposals for national health insurance have little chance of passing in the current session of Congress."

OUT OF 8,400 physicians and dentists checked recently by IRS because they had been reimbursed for $25,000 or more from Medicaid and Medicare, the IRS found only 47 cases to turn over to the Intelligence Division for tax fraud investigation.

Michigan
Medicine

MICHIGAN STATE MEDICAL SOCIETY

Published three times each month and four times in December and January, 38 issues, by the Michigan State Medical Society as its official journal. Second class postage paid at East Lansing, Mich. and at additional mailing offices. Yearly subscription rate, $9.00. Printed in USA. All communications should be addressed to the Publications Committee, Michigan State Medical Society, 120 West Saginaw Street, East Lansing, Michigan 48823.
© 1971 Michigan State Medical Society.
Phone: Area Code 517, 337-1351.

EDITOR: HERBERT A. AUER

Second Class Postage Paid at East Lansing, Mich.
and at additional mailing offices.

MEDIGRAMS
LATE NEWS FROM THE MICHIGAN STATE MEDICAL SOCIETY

U. C. SAN FRANCISCO
MEDICAL CENTER LIBRARY
~~DEC 21 1971~~

Michigan Medicine
June 30, 1971, Volume 70, Number 15
Michigan State Medical Society
Reading Time: 2 Mins. 15 Seconds

EVERY MSMS MEMBER will receive a Fee Survey in July as the second research project of the new MSMS Bureau of Economic Information. Work on the survey, reviewed and revised by the Specialty Section Chairmen, is being completed now. Cooperation of every member is sought by Dale L. Kessler, MD, chairman, MSMS Medical Socio-Economics Committee.

MEMBERS OF THE AMA HOUSE OF DELEGATES in Atlantic City last week heard President Nixon ask physicians to cooperate in a new educational campaign against drug abuse . . . and the next day, the AMA ran a full-page ad in the New York Times accepting the challenge. President Nixon promoted his administration's medical insurance package and said the Kennedy proposal "would actually hurt American health care."

The Michigan delegation was led by Donald N. Sweeny, Jr., MD, Detroit, who coordinated testimony by Michigan physicians before reference committees and in the House general sessions.

Wesley W. Hall, MD, of Nevada, was installed as the new president, and Charles A. Hoffman, MD, West Virginia, was chosen president-elect.

"OAKLAND COUNTY RESIDENTS are getting a good level of health care, according to a county-financed health needs study," reported the Pontiac Press in its article about a $65,000 survey financed by the county Board of Commissioners. The survey, by the E. D. Rosenfeld Associates of NYC, recommends $200 million in hospital and nursing home improvements.

SENATE RESOLUTION 98, offered by State Senator L. Harvey Lodge (R-Waterford) calls for an investigation of Blue Cross and Blue Shield by the Senate Commerce Committee. The resolution states, "Blue Cross and Blue Shield, two semi-monopolistic corporations, ostensibly nonprofit organizations and in fact being exempt from all state and local taxes on their funds and property, dominate their own fields and jointly and collectively unduly influence all other phases of health care . . . to a point where even the Legislature cannot understand or acquiesce in many of their practices." The resolution, referred to the Senate Policy Committee for consideration, would require a preliminary report by the opening of the 1972 legislative session and a final report before December 31, 1972.

Meanwhile, the much-amended HB 4030, requiring Blue Cross to contract with all licensed hospitals in Michigan, bounces between the two houses. Senators passed a substitute for the House bill, and the House amended the Senate version. The bill is back in the Senate now.

BILLS ARE STILL PENDING in the Michigan legislature to increase annual reregistration fees for physicians. House version would peg the annual fees at $25 for medicine, osteopathy, optometry, and chiropractic; while the Senate bill would set medicine and osteopathy at $15 per year.

MICHIGAN DOCTORS unable to obtain malpractice insurance are urged to report to MSMS . . . details about this matter appear on Page 685 in the July issue of Michigan Medicine. This information from doctors will help MSMS in its work with the new Michigan Legislative Committee studying malpractice.

TOP OFFICERS of Berrien, Van Buren and Kalamazoo medical societies participated recently in a dutch-treat dinner-conference in Kalamazoo with 4th District Councilor W. Kaye Locklin, MD. Discussions centered around various social-economic issues.

PROGRESS REPORTS on MSMS projects were reviewed by Richard Campau, manager, MSMS Department of Operations and Economics, at the June meeting of the Sanilac County Medical Society at Marlette.

MUS BOARD OF TRUSTEES on June 18 established a Department of Family and Community Medicine with James P. Howard, MPH, as acting chairman.

FDA ANNOUNCED June 23 that the commercial sale and distribution of Abbott Laboratories' intravenous fluids has been resumed. The FDA earlier this year had halted the use of Abbott fluids in hospitals when some infections were traced to bacterial contamination of bottle caps. Abbott is now using the rubber stopper closure system of Cutter Labs of California.

SB 134, ENDORSED BY MSMS, requiring MD or DO member on all single county Boards of Health, has been reported out by the Senate Committee on Health, Social Services and Retirement with recommendations for passage.

POSSIBILITIES OF SPECIAL Michigan medical history projects were discussed June 28 by MSMS Medical History Committee Chairman Irving Burton, MD, with Robert M. Warner, director, U-M Michigan Historical Collections.

THE FIRST LIST OF 13 grants by HEW for Health Maintenance Organization planning includes no Michigan recipients. The grants totaled $951,969. HEW has more than 100 applications for planning grants.

SEPTEMBER 15 has been set as the target date to mail the Handbook to the members of the MSMS House of Delegates for the fall session. Preliminary informational material will be sent out on September 1. The MSMS House will meet this year in Grand Rapids on Sunday, October 3 through Tuesday, October 5. Most speakers already have been selected for the Annual Scientific Session which will follow in Grand Rapids Wednesday and Thursday, October 6 and 7. John B. Bryan, MD, Royal Oak, is serving this year as coordinator for speakers, and John W. Moses, MD, Detroit, as coordinator for programs. Leaders of the various specialty sections are cooperating in the planning efforts.

Michigan
Medicine

MICHIGAN STATE MEDICAL SOCIETY

Published three times each month and four times in December and January, 38 issues, by the Michigan State Medical Society as its official journal. Second class postage paid at East Lansing, Mich. and at additional mailing offices. Yearly subscription rate, $9.00. Printed in USA. All communications should be addressed to the Publications Committee, Michigan State Medical Society, 120 West Saginaw Street, East Lansing, Michigan 48823. © 1971 Michigan State Medical Society. Phone: Area Code 517, 337-1351.

EDITOR: HERBERT A. AUER

Second Class Postage Paid at East Lansing, Mich.
and at additional mailing offices.

FEATURING ROSTER OF
MSMS MEMBERS BY COMPONENT SOCIETIES

Michigan Medicine

JANUARY 1971
VOL. 70 NO. 3

MICHIGAN
STATE MEDICAL
SOCIETY

Officers of the Michigan State Medical Society

PRESIDENT	Harold H. Hiscock, M.D.	Flint
PRESIDENT-ELECT	Sidney Adler, M.D.	Detroit
SECRETARY	Kenneth H. Johnson, M.D.	Lansing
TREASURER	John R. Ylvisaker, M.D.	Pontiac
SPEAKER	Vernon V. Bass, M.D.	Saginaw
VICE SPEAKER	James J. Fryfogle, M.D.	Detroit
PAST PRESIDENT	Robert J. Mason, M.D.	Birmingham

Officers and Members of The Council

CHAIRMAN	Ross V. Taylor, M.D.	Jackson
VICE CHAIRMAN	Brooker L. Masters, M.D.	Fremont
SECRETARY	Kenneth H. Johnson, M.D.	Lansing
TREASURER	John R. Ylvisaker, M.D.	Pontiac

Frank B. Bicknell, M.D.	1st	Detroit
Brock E. Brush, M.D.	1st	Detroit
Ralph R. Cooper, M.D.	1st	Detroit
Edward J. Tallant, M.D.	1st	Detroit
Milton R. Weed, M.D.	1st	Detroit
Ross V. Taylor, M.D.	2nd	Jackson
Robert M. Leitch, M.D.	3rd	Union City
W. Kaye Locklin, M.D.	4th	Kalamazoo
Noyes L. Avery, Jr., M.D.	5th	Grand Rapids
Ernest P. Griffin, Jr., M.D.	6th	Flint
John J. Coury, M.D.	7th	Port Huron
A. Carl Stander, M.D.	8th	Saginaw
Adam C. McClay, M.D.	9th	Traverse City
Robert C. Prophater, M.D.	10th	Bay City
Brooker L. Masters, M.D.	11th	Fremont
William A. LeMire, Sr., M.D.	12th	Escanaba
Donald T. Anderson, M.D.	13th	Kingsford
Donato F. Sarapo, M.D.	14th	Adrian
Sydney Scher, M.D.	15th	Mt. Clemens

Executive Staff

Tryloff, Warren F., Director
Ambrose, Bruce W., Manager, Department of Government Relations
Auer, Herbert A., Manager, Department of Communications and Professional Information
Campau, Richard M., Manager, Department of Operations and Economics

Administrative Staff

Berry, Margaret J. — Secretary, Accounting and Membership
Brewbaker, Mary K. — Committee and Exhibits Coordinator, Division of Scientific Affairs
Davis, Vada L. — Administrative Assistant to Director
Decker, Sherry L. — Secretary, Department of Communications and Professional Information
Evey, Lenora M. — Secretary, Department of Government Relations
Hall, Sherry L. — Special Assistant, Legislative Liaison, Department of Government Relations
Hendrickson, Patricia A. — Secretary to Manager, Department of Operations and Economics
Hirschy, Jean — Secretary, Division of Scientific Affairs
Hoover, Maynard J. — Reproduction Operator, Department of Operations and Economics
Marr, Judith E. — Managing Editor, *Michigan Medicine,* Communications and Professional Information
May, Lois — Receptionist
Mehler, Herbert — Government Agency Liaison Officer, Department of Government Relations
Roney, Robert J. — Controller, Accounting and Membership
Schulte, Helen A. — Chief, Division of Scientific Affairs
Van Deventer, Jacqueline — Coordinator of Women's Activities

Advisory Staff

Lester P. Dodd — General Counsel
Clyde T. Hardwick, Ph.D. — Economic Consultant
A. Stewart Kerr — Legal Counsel
John W. Moses, M.D. — Scientific Editor, *Michigan Medicine*

MICHIGAN STATE MEDICAL SOCIETY DIRECTORY

CONTENTS

This Directory lists the membership of each component medical society and therefore the total membership of the Michigan State Medical Society.

Page
Alcona County (Alpena-Alcona-Presque Isle) 6
Alger County (Marquette-Alger) 35
Allegan County 6
Alpena County (Alpena-Alcona-Presque Isle) 6
Antrim (Northern Michigan) 39
Arenac (Bay-Arenac-Iosco) 7

Baraga County (Houghton-Baraga-Keweenaw) 17
Barry County 6
Bay County (Bay-Arenac-Iosco) 7
Benzie County (Grand Traverse-Leelanau-Benzie) ... 16
Berrien County 8
Branch County 8

Calhoun County 8
Cass County 11
Charlevoix County (Northern Michigan) 39
Cheboygan County (Northern Michigan) 39
Chippewa County (Chippewa-Mackinac) 11
Clare County (Gratiot-Isabella-Clare) 16
Clinton County 11
Crawford (North Central Counties) 36

Delta County (Delta-Schoolcraft) 11
Dickinson County (Dickinson-Iron) 11

Eaton County 12
Emmet County (Northern Michigan) 39

Genesee County 12
Gladwin (North Central Counties) 36
Gogebic County 15
Grand Traverse County (Grand Traverse-Leelanau-Benzie) 16
Gratiot County (Gratiot-Isabella-Clare) 16

Hillsdale County 17
Houghton County (Houghton-Baraga-Keweenaw) 17
Huron County 18

Ingham County 18
Ionia County (Ionia-Montcalm) 21
Iosco County (Bay-Arenac-Iosco) 7
Iron County (Dickinson-Iron) 11
Isabella County (Gratiot-Isabella-Clare) 16

Jackson County 22

Kalamazoo County (Kalamazoo Academy of Medicine) 23
Kalkaska (North Central Counties) 36
Kent County 26
Keweenaw County (Houghton-Baraga-Keweenaw) 17

Page
Lake County (Mecosta-Osceola-Lake) 36
Lapeer County 31
Leelanau County (Grand Traverse-Leelanau-Benzie) 16
Lenawee County 31
Livingston County 32
Luce County 32

Mackinac County (Chippewa-Mackinac) 11
Macomb County 32
Manistee County 35
Marquette County (Marquette-Alger) 35
Mason County 35
Mecosta County (Mecosta-Osceola-Lake) 36
Menominee County 36
Midland County 36
Missaukee County (Wexford-Missaukee) 58
Monroe County 37
Montcalm County (Ionia-Montcalm) 21
Montmorency (North Central Counties) 36
Muskegon County 37

Newaygo County 39
North Central 36
Northern Michigan Counties (Antrim-Charlevoix-Cheboygan-Emmet) 39

Oakland County 40
Oceana County 48
Ogemaw (North Central Counties) 36
Ontonagon County 48
Osceola County (Mecosta-Osceola-Lake) 36
Oscoda (North Central Counties) 36
Otsego (North Central Counties) 36
Ottawa County 48

Presque Isle County (Alpena-Alcona-Presque Isle) ... 6

Roscommon (North Central Counties) 36

Saginaw County 49
St. Clair County 51
St. Joseph County 51
Sanilac County 52
Schoolcraft County (Delta-Schoolcraft) 11
Shiawassee County 52

Tuscola County 52

Van Buren County 53

Washtenaw County 53
Wayne County 59
Wexford County (Wexford-Missaukee) 58

Published Semi-Monthly, Trimonthly in December and January; 26 issues, by the Michigan State Medical Society as its official journal. Second class postage paid at East Lansing, Mich., and at additional mailing offices. Yearly subscription rate, $9.00; single copies, 80 cents. Additional postage: Canada, $1.00 per year. Printed in USA. All communications relative to manuscripts, advertising, news, exchanges, etc., should be addressed to Judith Marr, Managing Editor, Michigan State Medical Society, 120 West Saginaw Street, East Lansing, Michigan 48823. Phone Area Code 517, 337-1351. © 1971 Michigan State Medical Society. Directory photo of MSMS Headquarters by Tom Barber, Paw Paw.

Guide to Help Locate Cities within the Counties

This guide matches up the counties for all Michigan communities of 1,000 population or more.

Ada (Kent)
Addison (Lenawee)
Adrian (Lenawee)
Albion (Calhoun)
Algonac (St. Clair)
Allegan (Allegan)
Allendale (Ottawa)
Allen Park (Wayne)
Alma (Gratiot)
Almont (Lapeer)
Alpena (Alpena)
Ann Arbor (Washtenaw)
Augusta (Kalamazoo)

Bad Axe (Huron)
Baldwin (Lake)
Bangor (Van Buren)
Baraga (Baraga)
Bark River (Delta)
Battle Creek (Calhoun)
Bay City (Bay)
Bay View (Emmet)
Bear Lake (Manistee)
Belding (Ionia)
Bellaire (Antrim)
Belleville (Wayne)
Benton Harbor (Berrien)
Berkley (Oakland)
Berrien Center (Berrien)
Berrien Springs (Berrien)
Bessemer (Gogebic)
Beulah (Benzie)
Big Rapids (Mecosta)
Birch Run (Saginaw)
Birmingham (Oakland)
Blanchard (Isabella)
Blissfield (Lenawee)
Bloomfield Hills (Oakland)
Bloomingdale (Van Buren)
Boyne City (Charlevoix)
Branch (Mason)
Breckenridge (Gratiot)
Bridgeport (Saginaw)
Bridgman (Berrien)
Brighton (Livingston)
Bronson (Branch)
Brooklyn (Jackson)
Brown City (Sanilac)
Buchanan (Berrien)
Byron Center (Kent)

Cadillac (Wexford)
Caledonia (Kent)
Calumet (Houghton)
Camden (Hillsdale)
Capac (St. Clair)
Carleton (Monroe)
Caro (Tuscola)
Caseville (Huron)
Cass City (Tuscola)
Cassopolis (Cass)
Cedar Springs (Kent)
Center Line (Macomb)
Centreville (St. Joseph)
Champion (Marquette)
Charlevoix (Charlevoix)
Charlotte (Eaton)
Chassell (Houghton)
Cheboygan (Cheboygan)
Chelsea (Washtenaw)
Chesaning (Saginaw)
Clare (Clare)
Clarkston (Oakland)
Clawson (Oakland)
Clinton (Lenawee)
Clio (Genesee)
Coldwater (Branch)
Coleman (Midland)
Coloma (Berrien)
Colon (St. Joseph)
Columbiaville (Lapeer)
Concord (Jackson)
Constantine (St. Joseph)
Coopersville (Ottawa)
Corunna (Shiawassee)
Croswell (Sanilac)
Crystal Falls (Iron)
Custer (Mason)

Daggett (Menominee)
Davison (Genesee)
Dearborn (Wayne)
Dearborn Heights (Wayne)
Decatur (Van Buren)
Deckerville (Sanilac)
Deerfield (Lenawee)
Delton (Barry)
Detroit (Wayne)
Dewitt (Clinton)
Dexter (Washtenaw)
Douglas (Allegan)
Dowagiac (Cass)
Drayton Plains (Oakland)
Drummond Island (Chippewa)
Dundee (Monroe)
Durand (Shiawassee)

Eagle Harbor (Keweenaw)
East Detroit (Macomb)
East Jordan (Charlevoix)
East Lansing (Ingham)
East Tawas (Iosco)
Eaton Rapids (Eaton)
Ecorse (Wayne)
Edmore (Montcalm)
Edwardsburg (Cass)
Elk Rapids (Antrim)
Elkton (Huron)
Eloise (Wayne)
Elsie (Clinton)
Engadine (Mackinac)
Escanaba (Delta)
Essexville (Bay)
Evart (Osceola)

Fairgrove (Tuscola)
Farmington (Oakland)
Farwell (Clare)
Fennville (Allegan)
Fenton (Genesee)
Fenwick (Montcalm)
Ferndale (Oakland)
Flat Rock (Wayne)
Flint (Genesee)
Flushing (Genesee)
Fowlerville (Livingston)
Frandor (Ingham)
Frankenmuth (Saginaw)
Frankfort (Benzie)
Franklin (Oakland)
Fraser (Macomb)
Freeland (Saginaw)
Fremont (Newaygo)

Galesburg (Kalamazoo)
Garden City (Wayne)
Gaylord (Otsego)
Gladstone (Delta)
Gladwin (Gladwin)
Glen Arbor (Leelanau)
Gobles (Van Buren)
Goodrich (Genesee)
Grand Beach (Berrien)
Grand Blanc (Genesee)
Grand Haven (Ottawa)
Grand Ledge (Eaton)
Grand Marais (Alger)
Grand Rapids (Kent)
Grandville (Kent)
Grant (Newaygo)
Grayling (Crawford)
Greenville (Montcalm)
Grosse Ile (Wayne)
Gwinn (Marquette)

Hamburg (Livingston)
Hamilton (Allegan)
Hamtramck (Wayne)
Hancock (Houghton)
Hanover (Jackson)
Harbert (Berrien)
Harbor Beach (Huron)
Harbor Springs (Emmet)
Harper Woods (Wayne)
Harrison (Clare)
Harrisville (Alcona)
Harsens Island (St. Clair)
Hart (Oceana)
Hartford (Van Buren)
Haslett (Ingham)
Hastings (Barry)
Hazel Park (Oakland)
Hemlock (Saginaw)
Hessel (Mackinac)
Hickory Corners (Barry)
Highland (Oakland)
Highland Park (Wayne)
Hillsdale (Hillsdale)
Holland (Ottawa)
Holly (Oakland)
Holt (Ingham)
Homer (Calhoun)
Horton (Jackson)
Houghton (Houghton)
Howell (Livingston)
Hudson (Lenawee)
Hudsonville (Ottawa)
Huntington Woods (Oakland)

Imlay City (Lapeer)
Indian River (Cheboygan)
Inkster (Wayne)
Ionia (Ionia)
Iron Mountain (Dickinson)
Iron River (Iron)
Ironwood (Gogebic)
Ishpeming (Marquette)
Ithaca (Gratiot)

Jackson (Jackson)
Jamestown (Ottawa)
Jonesville (Hillsdale)

Kalamazoo (Kalamazoo)
Kalkaska (Kalkaska)
Keego Harbor (Oakland)
Kent City (Kent)
Kinde (Huron)
Kingsford (Dickinson)

Lake City (Missaukee)
Lakeland (Livingston)

Lake Odessa (Ionia)
Lake Orion (Oakland)
Lakeview (Montcalm)
Lambertville (Monroe)
LAnse (Baraga)
Lansing (Ingham)
Lapeer (Lapeer)
La Salle (Monroe)
Lathrup Village (Oakland)
Laurium (Houghton)
Lawrence (Van Buren)
Lawton (Van Buren)
Leonidas (St. Joseph)
Leslie (Ingham)
Lincoln Park (Wayne)
Linden (Genesee)
Litchfield (Hillsdale)
Livonia (Wayne)
Lowell (Kent)
Ludington (Mason)
Luther (Lake)
Luzerne (Oscoda)

Mackinaw Island (Mackinac)
Madison Heights (Oakland)
Manchester (Washtenaw)
Manistee (Manistee)
Manistique (Schoolcraft)
Manitou Beach (Lenawee)
Marcellus (Cass)
Marine City (St. Clair)
Marion (Osceola)
Marlette (Sanilac)
Marquette (Marquette)
Marshall (Calhoun)
Martin (Allegan)
Marysville (St. Clair)
Mason (Ingham)
Mecosta (Mecosta)
Melvindale (Wayne)
Memphis (St. Clair)
Menominee (Menominee)
Merrill (Saginaw)
Metamora (Lapeer)
Michigan Center (Jackson)
Middleville (Barry)
Midland (Midland)
Milan (Washtenaw)
Milford (Oakland)
Millington (Tuscola)
Mio (Oscoda)
Monroe (Monroe)
Montague (Muskegon)
Montrose (Genesee)
Morenci (Lenawee)
Mount Clemens (Macomb)
Mount Morris (Genesee)
Mount Pleasant (Isabella)
Muir (Ionia)
Mullet Lake (Cheboygan)
Munising (Alger)
Muskegon (Muskegon)
Muskegon Heights (Muskegon)

Nashville (Barry)
Negaunee (Marquette)
Newaygo (Newaygo)
Newberry (Luce)
New Buffalo (Berrien)
New Era (Oceana)
New Port (Monroe)
Niles (Berrien)
North Branch (Lapeer)
North Muskegon (Muskegon)
Northport (Leelanau)
Northville (Wayne)
Norway (Dickinson)

Oak Park (Oakland)
Okemos (Ingham)
Olivet (Eaton)
Onaway (Presque Isle)
Onsted (Lenawee)
Ontonagon (Ontonagon)
Orchard Lake (Oakland)
Oscoda (Iosco)
Ossineke (Alpena)
Otisville (Genesee)
Otsego (Allegan)
Ovid (Clinton)
Owosso (Shiawassee)
Oxford (Oakland)

Parchment (Kalamazoo)
Parma (Jackson)
Paw Paw (Van Buren)
Pentwater (Oceana)
Petoskey (Emmet)
Pigeon (Huron)
Pinckney (Livingston)
Pinconning (Bay)
Plainwell (Allegan)
Pleasant Lake (Jackson)
Pleasant Ridge (Oakland)
Plymouth (Wayne)
Pontiac (Oakland)
Portage (Kalamazoo)
Port Huron (St. Clair)
Portland (Ionia)
Potterville (Eaton)
Prudenville (Roscommon)
Pullman (Allegan)

Quincy (Branch)

Reading (Hillsdale)
Reed City (Osceola)
Reese (Tuscola)
Remus (Mecosta)
Richland (Kalamazoo)
Richmond (Macomb)
River Rouge (Wayne)
Riverview (Wayne)
Rives Junction (Jackson)
Rochester (Oakland)
Rockford (Kent)
Rockwood (Wayne)
Rogers City (Presque Isle)
Romeo (Macomb)
Romulus (Wayne)
Roscommon (Roscommon)
Rosebush (Isabella)
Roseville (Macomb)
Royal Oak (Oakland)

Saginaw (Saginaw)
Sagola (Dickinson)
Saline (Washtenaw)
Sandusky (Sanilac)
Sanford (Midland)
Saranac (Ionia)
Saugatuck (Allegan)
Sault Sainte Marie (Chippewa)
Sawyer (Berrien)
Schoolcraft (Kalamazoo)
Scottville (Mason)
Sebewaing (Huron)
Shelby (Oceana)
Sidney (Montcalm)
Southfield (Oakland)
Southgate (Wayne)
South Haven (Van Buren)
South Lyon (Oakland)
Sparta (Kent)
Spring Lake (Ottawa)
Stambaugh (Iron)
Standish (Arenac)
Stanton (Montcalm)
St. Charles (Saginaw)
St. Clair (St. Clair)
St. Clair Shores (Macomb)
Stephenson (Menominee)
Sterling Heights (Macomb)
St. Ignace (Mackinac)
St. James (Charlevoix)
St. Johns (Clinton)
St. Joseph (Berrien)
St. Louis (Gratiot)
Stockbridge (Ingham)
Sturgis (St. Joseph)
Sunfield (Eaton)
Suttons Bay (Leelanau)
Swartz Creek (Genesee)

Tawas City (Iosco)
Taylor (Wayne)
Tecumseh (Lenawee)
Temperance (Monroe)
Three Rivers (St. Joseph)
Traverse City (Grand Traverse)
Trenton (Wayne)
Troy (Oakland)
Trufant (Montcalm)

Ubly (Huron)
Union City (Branch)
Union Lake (Oakland)
Utica (Macomb)

Vandalia (Cass)
Vassar (Tuscola)
Vicksburg (Kalamazoo)
Vulcan (Dickinson)

Wakefield (Gogebic)
Walkerville (Oceana)
Walled Lake (Oakland)
Warren (Macomb)
Waterford (Oakland)
Watervliet (Berrien)
Wayland (Allegan)
Wayne (Wayne)
Weidman (Isabella)
Wellston (Manistee)
West Branch (Ogemaw)
Westland (Wayne)
Westphalia (Clinton)
White Cloud (Newaygo)
Whitehall (Muskegon)
White Pigeon (St. Joseph)
White Pine (Ontonagon)
Whitmore Lake (Washtenaw)
Williamston (Ingham)
Wixom (Oakland)
Wyandotte (Wayne)
Wyoming (Kent)

Yale (St. Clair)
Ypsilanti (Washtenaw)

Zeeland (Ottawa)

Directory, Listed by Component Medical Societies

Special Memberships are indicated as follows: "L" for Life Member; "M" for Military Members; "N" for Non-Resident Members; "R" for Retired Members; "A" for Associate Members; "O" for Osteopathic Associate Members; all others are Active Members.

ALLEGAN

A PETER BRACHMAN JR MD
222 TROWBRIDGE ST
ALLEGAN MICH 49010

WALTER E CHASE MD
223 W BRIDGE
PLAINWELL MICHIGAN 49080

JAMES I CLARK MD
ROUTE 1 BOX 25D
FENNVILLE MICH 49408

HARLAND C DANGLE MD
673 W FENNVILLE ST
FENNVILLE MI 49408

D W EVERETT MD
BOX 27
PLAINWELL MICH 49080

G B GODDARD MD
218 E ORLEANS
OTSEGO MICH 49078

JAMES D HAYS MD

DOUGLAS MICHIGAN 49406

ELWIN B JOHNSON MD L
ROUTE # 1
PULLMAN MI 49450

MARIETTA J KAYLOR MD
500 LINN ST
ALLEGAN MI 49010

VAN O KEELER MD
304 DIX ST
OTSEGO MI 49078

LAWRENCE LAGATUTTA MD
560 LINN ST
ALLEGAN MI 49010

JAMES E MAHAN MD L
402 TROWBRIDGE ST
ALLEGAN MICH 49010

KENNETH C MILLER MD

SAUGATUCK MI 49453

RICHARD PLOGENHOEF MD
304 DIX ST
OTSEGO MI 49078

JANIS PONE MD

MARTIN MICH 49070

MICHAEL SYED QUADIR MD
P O BOX 326
FENNVILLE MI 49408

GLADWIN E RAMSEYER MD
125 E BRIDGE
PLAINWELL MICH 49080

HARRY E SCHNEITER MD
425 CUTLER ST
ALLEGAN MICH 49010

WILLIAM H SCHOCK MD
315 MAPLE ST
SAUGATUCK MICH 49453

ELWIN W TOPP MD
353 NAOMI ST
PLAINWELL MICHIGAN 49080

ORHAN A TUGRUL MD
425 CUTLER ST
ALLEGAN MI 49010

WILLARD R VAUGHAN MD L

PLAINWELL MI 49080

BERTHA A WISEMAN MD
R R #4 BOX 143
ALLEGAN MICH 49010

C R YANG MD
412 WATER ST
ALLEGAN MI 49010

ALPENA-ALCONA-PRESQUE ISLE

PETER ALIFERIS MD
ALPENA GENERAL HOSP
ALPENA MICHIGAN 49707

DONALD C BROWN MD
601 CHISHOLM
ALPENA MICH 49707

JOHN W BUNTING MD R
P O BOX 542
ALPENA MI 49707

H J BURKHOLDER MD L
122 N SECOND AVE
ALPENA MICH 49707

STUART L COHN MD
1253 W WASHINGTON
ALPENA MICH 49707

AENEAS CONSTANTINE MD

HARRISVILLE MI 48740

THOMAS J COOK MD
312 E CHISHOLM ST
ALPENA MI 49707

CHARLES I EGLI MD
312 E CHISHOLM ST
ALPENA MI 49707

DONALD E FINCH MD

UNAWAY MI 49765

RICHARD FOLEY MD

ROGERS CITY MICH 49779

WILLIAM L FOX MD
601 W CHISHOLM ST
ALPENA MI 49707

JAMES GREENWOOD MD
115 N FIRST ST
ALPENA MI 49707

ALI GUNER MD
ALPENA GENERAL HOSP
ALPENA MI 49707

EDWARD A HIER MD
125 N SECOND AVE
ALPENA MICH 49707

WM F JACKSON MD
RFD 1 HURON SHORE DR
ROGERS CITY MI 49779

W F KUTSCHE MD
208 LAKE ST
OSCODA MICH 48753

W K LEHMANN MD
ALPENA GEN HOSP
ALPENA MI 49707

J M LEOPARD MD
312 E CHISHOLM
ALPENA MICH 49707

WM E NESBITT MD
123 N 2ND AVE
ALPENA MICH 49707

F C O DELL JR MD
615 W CHISHOLM ST
ALPENA MICH 49707

BRUCE R OHMART MD
108 SO FIRST ST
ALPENA MI 49707

ELBERT S PARMENTER MD L
316 W THIRD
DIXON IL 61021

J A RAMSEY MD
312 E CHISHOLM
ALPENA MICHIGAN 49707

ROBT C RIES MD
573 N BRADLEY HWY
ROGERS CITY MI 49779

JOHN L RIKER MD
601 N SECOND
ALPENA MICHIGAN 49707

PAUL A SCHOLTENS MD
ALPENA GEN HOSP
ALPENA MI 49707

JAMES E SPENS MD
123 N SECOND AVE
ALPENA MICH 49707

HENRY B STIBITZ MD
1065 US 23 NORTH
ALPENA MI 49707

DANA A TOMPKINS MD

POSEN MICH 49776

DARWIN E WAGONER MD
5007 N CEDAR LAKE RD
OSCODA MICHIGAN 48753

T M WATKINS MD
312 E CHISHOLM ST
ALPENA MICHIGAN 49707

T W WIENCZEWSKI MD
919 N 2ND AVE
ALPENA MICH 49707

CHAS S WILSON MD L
730 STATE AVE
ALPENA MICH 49707

BARRY

JAMES E ATKINSON MD
523 E CHARLES ST
HASTINGS MI 49058

LARRY BLAIR MD
1005 W GREEN
HASTINGS MI 49058

JACK A BROWN MD
535 FRANCIS
HASTINGS MI 49058

DOUGLAS H CASTLEMAN MD
607 N BROADWAY
HASTINGS MICHIGAN 49058

RAYMOND G FINNIE MD A
535 E FRANCIS
HASTINGS MICH 49058

ALEXANDER B GWINN MD L
BOX 91
WHITE CLOUD MI 49349

JOS D HEASLIP MD R
100 BLUFF VIEW DR
BELLEAIR BLUFFS FL 33540

MARINUS A HOFFS MD
911 FOURTH ST
LAKE ODESSA MICHIGAN 48849

STEWART LOFDAHL MD R
R 1 BOX 172
ST CHARLES IL 60174

WESLEY G LOGAN MD
1005 W GREEN ST
HASTINGS MICHIGAN 49058

CHARLES E MORRILL MD
1005 W GREEN ST
HASTINGS MI 49058

THOS W MYERS MD
307 N MAIN ST
NASHVILLE MICH 49073

ROBT B PRYOR MD
400 W STATE ST
HASTINGS MICHIGAN 49058

JAMES R SPINDLER MD
1005 W GREEN ST
HASTINGS MI 49058

JACK L TROMP MD
R D 3
LAKE ODESSA MICH 48849

BAY-ARENAC-IOSCO

KENT A ALCORN MD
1420 CENTER AVE
BAY CITY MICH 48706

MARSHALL W ALCORN MD
1420 CENTER AVE
BAY CITY MICH 48706

ARTHUR D ALLEN MD L
101 W JOHN ST
BAY CITY MI 48706

ROBERT C ANTLE MD
101 W JOHN ST
BAY CITY MICHIGAN 48706

RICHARD B ASBURY M D
2110 16TH ST
BAY CITY MICHIGAN 48706

JOHN N ASLINE MD
207 N WALNUT ST
BAY CITY MICH 48706

JUSTUS J AUSTIN MD R
ROUTE 1
EAST TAWAS MI 48730

RICHARD E BICKHAM MD
101 W JOHN ST
BAY CITY MI 48706

DAVID A BOWMAN MD
1815 WM H TAFT RD
CINCINNATI OHIO 45206

JIRI JOSEF BOZDECH MD
900 N JACKSON
BAY CITY MICH 48706

FREDERICK E BRENNER MD
2171 CENTER AVE
BAY CITY MI 48706

HARVEY H BRINKMAN MD
116 W STATE ST
EAST TAWAS MICH 48730

GEO M BROWN MD L
207 N WALNUT ST
BAY CITY MI 48706

GEORGE T BUECHLE MD
175 E PINCONNING DR
PINCONNING MI 48650

TOMAS R CAJIGAS MD
1908 COLUMBUS AVE
BAY CITY MI 48706

DONALD A CAMPBELL MD
700 BORTON
ESSEXVILLE MICHIGAN 48732

JOHN S CAMPBELL MD
2107 SIXTEENTH ST
BAY CITY MICH 48706

HUGH K COOK MD
101 W JOHN ST
BAY CITY MICH 48706

RAYMOND R COOK MD
1115 FIFTH STREET
BAY CITY MICHIGAN 48706

JAMES C COOPER MD
2110 16TH ST
BAY CITY MI 48706

STANLEY A COSENS MD
101 W JOHN ST
BAY CITY MICH 48706

ROBT R CRISSEY MD
1405 CENTER AVE
BAY CITY MICH 48706

ROBT H CRISWELL MD L
3419 PORTAGE BLVD #43
FT WAYNE INDIANA 46804

NICHOLAS CSONKA MD
1308 COLUMBUS AVE
BAY CITY MICHIGAN 48706

MICHAEL J DARDAS MD
1413 CENTER AVE
BAY CITY MICHIGAN 48706

JAMES H DAVIS MD
1308 COLUMBUS
BAY CITY MICHIGAN 48706

MALCOLM K DOLBEE MD
BOX 518
STANDISH MICHIGAN 48658

JAMES L FENTON MD A
701 N GRANT ST
BAY CITY MI 48706

ROBERT FERGUSON MD
101 W JOHN ST
BAY CITY MICHIGAN 48706

HANS FISCHER MD

STANDISH MICHIGAN 48658

WM M FOLLIS MD
101 W JOHN
BAY CITY MICH 48706

WM G GAMBLE JR MD L
2010 5TH AVE
BAY CITY MICH 48706

JOHN T GENECZKO MD
1308 COLUMBUS AVE
BAY CITY MICH 48706

JOHN W GRIGG MD
515 MULHOLLAND ST
BAY CITY MICHIGAN 48706

MONO GUERAMY MD
1411 CENTER AVE
BAY CITY MI 48706

ROBERT C HAFFORD MD
101 W JOHN ST
BAY CITY MICH 48706

GAYLAND L HAGELSHAW MD
101 W JOHN ST
BAY CITY MICH 48706

HAROLD H HEUSER MD
916 WASHINGTON AVE
BAY CITY MICH 48706

SAML F HOROWITZ MD
1415 CENTER AVE
BAY CITY MICH 48706

WALTER L HOWLAND MD
2110 E 16TH ST
BAY CITY MI 48706

J E JACQUES MD

TAWAS CITY MICHIGAN 48763

MARTIN D JAFFE MD
2110 16TH STREET
BAY CITY MICHIGAN 48706

RICHARD L JANKOWSKA MD
2110 16TH ST
BAY CITY MI 48706

OTTO F JENS MD L

ESSEXVILLE MI 48732

ORLEN J JOHNSON MD L
207 N WALNUT ST
BAY CITY MI 48706

M CULVER JONES MD
900 N JACKSON
BAY CITY MICH 48706

TYRE K JONES III MD
1639 CARLA CT
ESSEXVILLE MI 48732

LARRY STANLEY KELLY MD

TAWAS CITY MICHIGAN 48763

MANA KESSLER MD L
504 W MIDLAND ST
BAY CITY MI 48706

SABINA KESSLER FRUX MD L
504 W MIDLAND ST
BAY CITY MI 48706

HOWARD T KNOBLOCH MD
1102 COLUMBUS
BAY CITY MICH 48706

MARTA SZEGO KOLTAY MD
3439 HIGHLAND WOODS
BAY CITY MI 48706

OSCAR P KOLTAY MD
3439 HIGHLAND WOODS
BAY CITY MI 48706

LASZLO KOVACSI MD
820 N JOHNSON
BAY CITY MICHIGAN 48706

EUGENE J KULINSKI MD
2110 16TH ST
BAY CITY MICHIGAN 48706

LESLIE A LAMBERT MD R
ROUTE #2
EAST TAWAS MICHIGAN 48730

JOHN L LANGIN MD
100 15TH ST
BAY CITY MICH 48706

JOHN C LEY MD
101 W JOHN ST
BAY CITY MI 48706

G B LOAN M D
ESSEXVILLE MDCL BLDG
ESSEXVILLE MI 48732

JOSEPH LOREE MD
1407 CENTER AVE
BAY CITY MICHIGAN 48706

JOHN C MAYNE M D
2108 16TH ST
BAY CITY MICH 48706

HARRY B MC GEE MD
101 W JOHN
BAY CITY MICHIGAN 48706

PETER L MC GEE M D
2110 16TH ST
BAY CITY MICH 48706

LEO B MC SHERRY JR MD
1308 COLUMBUS AVE
BAY CITY MICH 48706

EDWIN C MILLER MD
101 W JOHN ST
BAY CITY MICH 48706

ARLYN MOELLER MD
700 BORTON AVE
ESSEXVILLE MICHIGAN 48732

ALLEN B MOORE MD
1106 S MADISON ST
BAY CITY MI 48706

NEAL R MOORE MD
2138 FIFTH STREET
BAY CITY MICH 48706

DWIGHT J MOSIER MD
101 W JOHN ST
BAY CITY MICH 48706

SEZAI OLGAC MD
101 W JOHN ST
BAY CITY MI 48706

NORMAN P PAYEA MD
217 NEWMAN ST
EAST TAWAS MI 48730

STANLEY M PEARSON MD
101 W JOHN ST
BAY CITY MICH 48706

B L PEDERSON MD
2108 16TH ST
BAY CITY MI 48706

WALTER E PELCZAR MD
1308 COLUMBUS AVE
BAY CITY MICH 48706

ROBT C PROPHATER MD
202 BOEHRINGER CT
BAY CITY MICHIGAN 48706

ALAN A REIDINGER MD M
4307 ELMWOOD
ROYAL OAK MI 48073

E H RODDA MD
101 W JOHN ST
BAY CITY MICH 48706

CHARLES S ROGERS MD
101 W JOHN ST
BAY CITY MICHIGAN 48706

PAUL W ROWE MD
MERCY HOSPITAL
BAY CITY MICHIGAN 48706

WM J SCHMELZER MD
602 MERCER ST PO 746
PINCONNING MICHIGAN 48650

HAROLD C SHAFER MD
101 W JOHN ST
BAY CITY MICH 48706

HUBERT L SHIELDS MD
101 W JOHN ST
BAY CITY MICH 48706

DAVID STANDIFORD MD
2108 16TH ST
BAY CITY MICHIGAN 48706

LIVIUS N STROIA MD
101 W JOHN ST
BAY CITY MICH 48706

R L SUTTON JR MD
116 W STATE ST
EAST TAWAS MICH 48730

ZIA E TAHERI MD
1411 CENTER AVENUE
BAY CITY MICHIGAN 48706

CLYDE S TARTER MD R
ROUTE 5
ALPENA MI 49707

GAYLORD TREADWAY MD
900 N JACKSON
BAY CITY MICH 48706

HARRY F VAIL MD
564 W HAMPTON RD
ESSEXVILLE MI 48732

P VANASUPA MD
101 W JOHN ST
BAY CITY MICHIGAN 48706

JOHN H WAY MD
101 W JOHN ST
BAY CITY MI 48706

THOS G WILSON MD R
210 PHILADELPHIA CT
PALM HARBOR FL 33563

JOHN WINBURNE MD
101 W JOHN ST
BAY CITY MI 48706

HARRIS L WOODBURNE MD
1420 CENTER ST
BAY CITY MICH 48706

THOMAS B WRIGHT MD
101 W JOHN ST
BAY CITY MICH 48706

ALOIS L ZILIAK JR MD
3447 HIGHLAND WOODS
BAY CITY MICH 48706

BERRIEN

DEAN R ASSELIN MD
2817 S STATE ST
ST JOSEPH MICHIGAN 49085

ROBERT L ATKINSON MD
777-D RIVERVIEW DR
BENTON HARBOR MI 49022

JOHN H BAILEY MD
2150 SAMUEL AVE
BENTON HARBOR MICH 49022

GERALD N BEAL MD
2817 S STATE ST
ST JOSEPH MICH 49085

WM H BENNER MD
960 AGARD ST LAB
BENTON HARBOR MI 49022

IAM P BHISITKUL MD
1 SOUTH 5TH ST
NILES MI 49120

DIXON L BIERI MD
645 RIVERVIEW DR
BENTON HARBOR MICH 49022

AUGUST F BLIESMER MD
505 PLEASANT ST
ST JOSEPH MICH 49085

WILLIAM C BOCK MD
777D RIVERVIEW DR
BENTON HARBOR MI 49022

JOHN W BRINK MD
807 MYRTLE ST
ST JOSEPH MI 49085

JACK BRONFENBRENNER MD
687 E EMPIRE AVE
BENTON HARBOR MICH 49022

JOHN R BRUNI M D
1 SOUTH FIFTH ST
NILES MICH 49120

FRANK H BUNKER MD
777D RIVERVIEW DR #108
BENTON HARBOR MI 49022

HALE W CADIEUX MD
645 RIVERVIEW DR
BENTON HARBOR MICH 49022

DONALD C CAMP MD
8 N ST JOSEPH AVE
NILES MICH 49120

JOHN H CARTER MD
687 E EMPIRE AVENUE
BENTON HARBOR MICH 49022

HAROLD J CAWTHORNE MD R
R 4 BOX 201
COLOMA MI 49038

WM A CHICKERING
2016 LAKEVIEW
ST JOSEPH MI 49085

S G CILELLA M D
PAWATING HOSPITAL
NILES MICH 49120

JOS CONWAY MD
358 N MAIN
WATERVLIET MI 49098

ROBT C CONYBEARE MD
777D RIVERVIEW DR
BENTON HARBOR MICH 49022

WELDON COOKE MD
BERRIEN GENERAL HOSP
BERRIEN CENTER MICH 49102

WM L COOPER MD
5230 HUNTINGTON N E
ST PETERSBURG FL 33703

RICHARD C CROWELL MD
1510 N EDGEMONT
C/O SO CALIF PERM
MEDICAL GROUP
LOS ANGELES CA 90027

WALTER S DAILEY MD
122 GRANT ST
NILES MICHIGAN 49120

ARCHIE J DALGLEISH MD
373 N MAIN ST
WATERVLIET MICH 49098

JOHN E DOOLITTLE MD
9 S ST JOSEPH AVENUE
NILES MICHIGAN 49120

HAZEL D EIDSON M D L

BERRIEN SPRINGS MI 49103

RICHARD M ELGHAMMER MD
1850 COLFAX AVE
BENTON HARBOR MICH 49022

CLAYTON S EMERY MD L
1329 LAKE BLVD
ST JOSEPH MI 49085

WM K EMERY MD
1020 NILES AVE
ST JOSEPH MICH 49085

MICHAEL FABER MD
756 PIPESTONE ST
BENTON HARBOR MICH 49022

GROVER R FATTIC JR MD
61 N ST JOSEPH AVE
NILES MICHIGAN 49120

MARSHALL J FEELEY MD
2516 NILES AVE
ST JOSEPH MICH 49085

MORRIS E FRIEDMAN MD
115 N BARTON ST
NEW BUFFALO MI 49117

JAMES O GALLES MD
429 PAW PAW AVE
COLOMA MI 49038

CLARENCE GILLETTE MD L
R F D 4 M 60 W
NILES MICH 49120

SAMUEL H GOULD MD
1850 COLFAX AVE
BENTON HARBOR MICH 49022

BARBARA G GREEN MD
2600 MORTON STREET
ST JOSEPH MICH 49085

ROBT L GREEN MD
2600 MORTON STREET
ST JOSEPH MICH 49085

JAMES H GROVE MD
102 NO 4TH ST
NILES MI 49120

HAROLD M GRUNDSET MD
61 N ST JOSEPH AVE
NILES MICHIGAN 49120

RALPH D GUSTIN MD
PO BOX 159
BERRIEN SPRINGS MI 49103

ARTHUR S HAIGHT MD
645 RIVERVIEW DR
BENTON HARBOR MI 49022

D KENT HASSAN MD
802 E FRONT ST
BUCHANAN MICH 49107

EDWARD C HAUPT MD
777D RIVERVIEW DR
BENTON HARBOR MICH 49022

FRED C HENDERSON MD
703 E MAIN
NILES MICH 49120

NOEL J HERSHEY MD
PO BOX 222
NILES MICH 49120

DAVID W HILLS MD
2821 STATE ST
ST JOSEPH MICHIGAN 49085

FRANK W HOWARD MD
756 PIPESTONE
BENTON HARBOR MICH 49022

DEAN HUDNUTT MD
807 MYRTLE ST
ST JOSEPH MI 49085

HAROLD D HUFF MD R
126-1/2 E MAIN ST
NILES MICH 49120

EDWIN R IRGENS MD
11 PEOPLES ST BK BLDG
ST JOSEPH MICH 49085

WADI J JIBRAIL MD
2912 S STATE ST
ST JOSEPH MI 49085

DIRK G JOCHEMS MD
CLARK EQUIP CO
BUCHANAN MICH 49107

WM H JOHNSTON MD
715 MARKET ST
ST JOSEPH MICH 49085

HARVEY I KELSALL MD
1600 NILES AVE
ST JOSEPH MICH 49085

W J KENFIELD MD
P O BOX 6
ST JOSEPH MI 49085

F ALAN KENNEDY MD
315 FIDELITY BLDG
BENTON HARBOR MICH 49022

ORHAN KILIC MD
8 N ST JOSEPH ST
NILES MI 49120

FRANK A KING JR MD
858 PIPESTONE
BENTON HARBOR MICH 49022

HENRY J KLOS MD
777-D RIVERVIEW DR
BENTON HARBOR MI 49022

ROBT L LANDGRAF MD
PO BOX 222
NILES MICH 49120

DAVID W LEARNED MD
645 RIVERVIEW DR
BENTON HARBOR MICH 49022

HAI SOON LEE MD
711 BEECHWOOD DRIVE
NILES MICHIGAN 49120

JOHN B LEVA MD
1122 SALEM AVE
BENTON HARBOR MICH 49022

FREDK H LINDENFELD MD
8 N ST JOSEPH AVE
NILES MICH 49120

RICHARD E LININGER MD
2712 HIGHLAND CT
ST JOSEPH MICH 49085

FRANK LINN MD
2522 NILES
ST JOSEPH MICH 49085

GENE E MADDOCK MD
MERCY HOSP X-RAY DEPT
BENTON HARBOR MI 49022

JOHN T MANNING MD
3838 BERRENDO
SACRAMENTO CA 95825

J T MC LELLAND MD
MERCY HOSP X RAY DEPT
BENTON HARBOR MICH 49022

STANLEY M MESIROW MD
777D RIVERVIEW DR
BENTON HARBOR MICH 49022

T SCOTT MOORE MD
24 NO ST JOSEPH
NILES MICH 49120

CHAN NAMTZE MD
302 BROADWAY
NILES MICHIGAN 49120

JOHN J O TOOLE MD
133 E NAPIER
BENTON HARBOR MICH 49022

CHAS J OZERAN MD
127 E NAPIER
BENTON HARBOR MICH 49022

WM J PADELFORD MD
206 WHIPPLE BLVD
SOUTH LYON MI 48178

CHARLES E PAYNE MD
2724 NILES AVE
ST JOSEPH MI 49085

DAVID K PESHKA MD
61 N ST JOSEPH AVE
NILES MICHIGAN 49120

SANFORD POLANSKY MD
84 W MAIN ST
BENTON HARBOR MICH 49022

CHAS B PORTER MD
1589 COLFAX AVE
BENTON HARBOR MICH 49022

JOSEPH J RAMBO MD
555 LAKE ST
BRIDGMAN MICH 49106

DEAN K RAY MD
2522 NILES
ST JOSEPH MICH 49085

ROBT E REAGAN MD
232 WINDSOR
BENTON HARBOR MICH 49022

ALBERT RIZZO MD
2912 S STATE ST
ST JOSEPH MI 49085

J F GIRARD ROOKS MD
2611 MORTON
ST JOSEPH MI 49085

J GRISWOLD RUTH MD
1304 SENECA RD
BENTON HARBOR MI 49022

JAMES W SKINNER MD
460 RIDGEWAY ST
ST JOSEPH MICH 49085

W B SMITH MD
133 E NAPIER
BENTON HARBOR MICH 49022

MANUEL R SORI MD
777D RIVERVIEW DR
BENTON HARBOR MICH 49022

BOUTON F SOWERS MD
VA HOSPITAL QUARTERS 6
TOMAH WISC 54660

JOHN W STRAYER MD
PO BOX 222
NILES MICH 49120

BURTON M SUTHERLAND MD
BERRIEN GEN HOSP
BERRIEN CENTER MI 49102

JOHN J TURNER MD
2817 S STATE ST
ST JOSEPH MICH 49085

MAURICE D URIST MD
454 PIPESTONE ST
BENTON HARBOR MICH 49022

JOHN A VALANTIEJUS MD
RR2 CEDAR LANE FARM
NEW BUFFALO MICH 49117

ANDRES H VASQUEZ MD
11 E MERCHANT
NEW BUFFALO MI 49117

RUSSELL J VASTINE JR
430 W CHICAGO
BUCHANAN MICHIGAN 49107

WAYNE L WERTZ MD
2522 NILES AVE
ST JOSEPH MI 49085

ROBERT W WESCHE MD
BERRIEN GENERAL HOSP
BERRIEN CENTER MI 49102

H O WESTERVELT MD L
539 PEARL ST
BENTON HARBOR MI 49022

DEAN WILLSON MD
777D RIVERVIEW DR
BENTON HARBOR MICH 49022

CLINTON W WILSON MD
925 PIPESTONE ST
BENTON HARBOR MICH 49022

WARREN A WISE MD
7770 RIVERVIEW DR
BENTON HARBOR MI 49022

HACKLEY E WOODFORD MD
195 SO WILSON AVE
PALM MANOR APT 15
PASADENA CA 91106

BRANCH

NAPIER S ALDRICH MD
162 MARSHALL ST
COLDWATER MICH 49036

CHARLES R BACON MD
300 E CHICAGO ST
COLDWATER MICH 49036

JAMES E BAILEY JR MD
300 E CHICAGO ST
COLDWATER MICH 49036

JAMES R BAKER MD
1100 UNION CITY RD
COLDWATER MI 49036

DEAN T CULVER MD
173 E CHICAGO ST
COLDWATER MICH 49036

ROBT J FRASER MD
52 FAIRFIELD DR
COLDWATER MICH 49036

ORMOND D GEIB MD L
133 WALNUT BLVD
ROCHESTER MI 48063

JACK GIFT MD
274 E CHICAGO ST
COLDWATER MI 49036

HENRY C GOMLEY MD
108 E CHICAGO ST
BRONSON MICH 49028

JOHN C HEFFELFINGER MD
292 E CHICAGO AVE
COLDWATER MICH 49036

RONALD H HOEKSEMA MD
292 E CHICAGO ST
COLDWATER MICH 49036

ROBT M LEITCH MD
401 ANN ST
UNION CITY MICH 49094

HAROLD J MEIER MD L
87 W PEARL ST
COLDWATER MI 49036

HENRY R MOOI MD
292 E CHICAGO ST
COLDWATER MICH 49036

HARVEY L MOSS MD
47 CARLYLE
COLDWATER MICHIGAN 49036

WM E NETTLEMAN MD
87 W PEARL ST
COLDWATER MICHIGAN 49036

KENNETH L OLMSTED MD
675 MONROE
COLDWATER MICHIGAN 49036

VANGALA P REDDY MD
292 E CHICAGO ST
COLDWATER MI 49036

FREDERICK C REIGLE MD
LITCHFIELD MICHIGAN 49252

JOHN J RICK MD
61 E CHICAGO ST
COLDWATER MICHIGAN 49036

H K SCHILLINGER MD
BOX 148
COLDWATER MICHIGAN 49036

MALCOLM D STEIDER MD
159 E CHICAGO
COLDWATER MI 49036

WILLIAM K STEWART MD
403 ANN ST
UNION CITY MICHIGAN 49094

JAMES A THOMAS MD L
1200 NO SHORE DR #108
ST PETERSBURG FL 33701

F P VALDERRAMA MD
235 E CHICAGO
COLDWATER MI 49036

NATHANIEL J WALTON MD
BOX 148
COLDWATER MICHIGAN 49036

CHIEH-CHENG WU MD
235 E CHICAGO ST
COLDWATER MI 49036

CALHOUN

LAMBERT J AGIN MD A
36 CHESTNUT ST
BATTLE CREEK MI 49017

ARNOLD A ALBRIGHT MD
R 1 BOX 300
BATTLE CREEK MI 49017

R H ALLEN M D
191 COLLEGE
BATTLE CREEK MICH 49017

NORMAN H AMOS MD R
710 NORTH AVENUE
BATTLE CREEK MI 49017

NORMAN O AMOS MD
710 NORTH AVENUE
BATTLE CREEK MI 49017

HAROLD E ANDERSON MD
131 E COLUMBIA AVE
BATTLE CREEK MI 49015

VICTOR AZUELA MD
124 LAKEVIEW AVE
BATTLE CREEK MI 49015

JAMES E BAKER MD A
VA HOSPITAL
BATTLE CREEK MI 49016

RICHARD L BAKKEN MD
200 COLLEGE ST
BATTLE CREEK MICH 49017

STUART P BARDEN MD
LEILA HOSP
BATTLE CREEK MICH 49014

ROY H BARIBEAU MD L
1003 CAPITAL AVE SW
BATTLE CREEK MI 49015

GEORGE H BARTELS MD
151 NORTH AVE
BATTLE CREEK MI 49017

JOHN BERGHORST MD A
89 S LAVISTA BLVD
BATTLE CREEK MI 49015

PHILIP P BONIFER JR MD
131 E COLUMBIA #213
BATTLE CREEK MI 49015

PHILIP P BONIFER MD
231 NORTH AVE
BATTLE CREEK MICH 49017

ROBT W BROWN MD
231 NORTH AVENUE
BATTLE CREEK MICH 49017

MARTIN F BUELL MD A
V A HOSPITAL
FT CUSTER MICHIGAN 49016

ALLEN W BYRNES MD
13833 KAANAPALI DR
SUN CITY ARIZ 85351

ALICE F CAMPBELL MD
103 E MULBERRY ST
ALBION MICH 49224

RICHARD J CAMPBELL MD R
BOX 158 CAPE HAZE
PLACIDA FL 33946

MARCELO CANLAS MD
LEILA HOSPITAL
9 EMMETT ST
BATTLE CREEK MI 49016

M J CAPRON JR MD
806 SECURITY BK BLDG
BATTLE CREEK MICH 49014

L HAROLD CAVINESS MD
185 N WASHINGTON
BATTLE CREEK MICH 49017

EDWARD M CHANDLER MD
411 MICH NAT BK BLDG
BATTLE CREEK MICH 49014

CHARLES CHEN MD
167 COLLEGE
BATTLE CREEK MI 49017

WM R CHYNOWETH MD L
207 POST BLDG
BATTLE CREEK MICH 49017

JACK E COAKES MD A
716 GORHAM ST
MARSHALL MI 49068

GRAHAM F COLQUHOUN MD
188 COLLEGE ST
BATTLE CREEK MICH 49017

WILLIAM B COMAI MD
110 SHADYWOOD LN
BATTLE CREEK MI 49015

RALPH A CRAM MD
500 S IONIA ST
ALBION MICH 49224

ROBT K CURRY MD
HOMER MI 49245

HAROLD L DALY JR MD
500 S IONIA ST
ALBION MICHIGAN 49224

MARY V DALY MD
201 RIVER ST
ALBION MI 49224

MIRIAM S DALY MD
500 S IONIA ST
ALBION MICH 49224

PAUL J DIAMANTE MD
710 NORTH AVENUE
BATTLE CREEK MICH 49017

M EKREM DIMBILOGLU MD
1018 NORTH AVE
BATTLE CREEK MI 49017

WARREN M DODGE JR MD R
75 LAUREL DR
BATTLE CREEK MI 49017

ROBERT EDWARDS MD A
CHIEF OF STAFF
VA HOSPITAL
BATTLE CREEK MI 49016

STEPHEN FAIRBANKS MD R
WELLSTON MI 49689

PATRICK S FERAZZI M D
1018 NORTH AVE
BATTLE CREEK MICH 49017

DUWARD L FINCH MD R
719 CAPITAL AVE S W
BATTLE CREEK MICH 49015

ROBT E FISHER MD
1501 W MICHIGAN AVE
BATTLE CREEK MICH 49017

ROBT H FRASER MD L
1112 SECURITY BK BLDG
BATTLE CREEK MI 49014

WM G FRITSCHEL MD
109 W ERIE ST
ALBION MI 49224

L D FUNK MD
133 W BURR OAK
ATHENS MICHIGAN 49011

A M GIDDINGS MD L
BATTLE CREEK SAN
BATTLE CREEK MI 49017

E PAUL GIESER JR MD
188 COLLEGE
BATTLE CREEK MICH 49017

JOHN G GIRARDOT MD
1407 SECURITY TOWER
BATTLE CREEK MICH 49014

PHILIP R GLOTFELTY MD
123 S JEFFERSON
MARSHALL MICHIGAN 49068

FRANKLIN L GRAUBNER MD
BOGAR THEATER BLDG
MARSHALL MICH 49068

J ALAN GRAY MD
309 MICH NATL BK BLDG
BATTLE CREEK MICH 49014

HAROLD E GREEN MD
P O BOX 1518
BATTLE CREEK MI 49016

JACK C GRIFFITH MD
616 MICH NAT BNK BLDG
BATTLE CREEK MICH 49014

MEHMET E HALAC MD
231 NORTH AVE
BATTLE CREEK MI 49017

ALFRED HAMADY MD
1018 NORTH AVE
BATTLE CREEK MICH 49017

HARVEY C HANSEN MD
231 NORTH AVE
BATTLE CREEK MICH 49017

DONALD M HARRIS MD
517 E ROOSEVELT
BATTLE CREEK MI 49017

PHILIP M HENDERSON MD
109 W ERIE
ALBION MICH 49224

J D HENRIKSEN MD
119 ST PETERS ALBANS
HERTS ENGLAND

DONALD K HIBBS MD
AM LEGION HOSP
BATTLE CREEK MI 49016

MARJORIE J HICKMAN MD A
216 NORTH AVE
BATTLE CREEK MI 49017

C C HIGGINS MD
710 NORTH AVE
BATTLE CREEK MI 49017

GABRIEL D HOLLIS MD
124 LAKEVIEW AVE
BATTLE CREEK MI 49015

LEONARD R HOWARD MD
1506 SECURITY TOWER
BATTLE CREEK MI 49014

JAMES W HUBLY MD R
777 S E 2ND AVE #309
DEERFIELD BEACH FL 33441

ARCHIE E HUMPHREY MD
122 N MADISON ST
MARSHALL MI 49068

ARTHUR A HUMPHREY MD
P O BOX 1518
BATTLE CREEK MICH 49016

HERBERT E HUMPHREY MD
122 N MADISON ST
MARSHALL MICHIGAN 49068

JOHN HUNTINGTON MD
710 NORTH AVE
BATTLE CREEK MICH 49017

DWIGHT JACOBSON MD
411 MICH NATL BANK
BATTLE CREEK MI 49014

JAMES R JEFFREY MD L
62 ANN AVE
BATTLE CREEK MI 49017

MELVIN JOHNSON JR MD
710 NORTH AVENUE
BATTLE CREEK MI 49017

AUBREY H JONES MD A
513 W MICHIGAN AVE
MARSHALL MI 49068

TYRE K JONES MD
118 W GREEN
MARSHALL MICH 49068

GEO T KELLEHER MD
235 NORTH AVE
BATTLE CREEK MICH 49017

JAMES D KIESS MD
710 NORTH AVE
BATTLE CREEK MI 49017

MATTHEW R KINDE MD A
400 NORTH AVE
BATTLE CREEK MI 49016

PAUL C KINGSLEY MD
191 COLLEGE
BATTLE CREEK MICH 49017

EDWARD J KLOPP MD
173 COLLEGE ST
BATTLE CREEK MICH 49017

GORDON W LAKKE MD
151 NORTH AVE
BATTLE CREEK MI 49017

FRANCIS L LAM MD
408 CAPITAL AVE S W
BATTLE CREEK MICH 49015

VANCE B LANCASTER MD
710 NORTH AVE
BATTLE CREEK MI 49017

FRANK LANUTI MD
215 NORTH AVE
BATTLE CREEK MI 49017

JOS LEVY JR MD
231 NORTH AVE
BATTLE CREEK MICH 49017

WALTER B LONG MD

HOMER MICH 49245

KENNETH H LOWE MD R
231 NORTH AVE
BATTLE CREEK MICH 49017

STANLEY T LOWE MD R
12 HIAWATHA DR
BATTLE CREEK MI 49015

C A E LUND MD
226 DOGWOOD TRAIL
BATTLE CREEK MI 49017

JAMES J MAURER MD
616 MICH NATL BK BLDG
BATTLE CREEK MICH 49014

ALFRED G MC CUAIG MD
719 CAPITAL ST S W
BATTLE CREEK MICH 49015

JOHN W MCGEE MD
105 IRWIN AVE
ALBION MICHIGAN 49224

FREDK J MELGES MD
1506 SECURITY TOWER
BATTLE CREEK MICH 49014

HUGH K MOIR MD A
95 W SPAULDING
BATTLE CREEK MI 49017

DONALD B MORRISON MD
719 CAPITAL ST S W
BATTLE CREEK MICH 49015

H F MULLENMEISTER MD
614 N E CAPITAL
BATTLE CREEK MICH 49017

CASMIR MURILLO MD
4207 CLIFF DRIVE
STOCKTON CALIF 95204

JULES L NETREBA MD
112 W MANSION
MARSHALL MI 49068

ANNE F NORGAN MD
131 E COLUMBIA #207
BATTLE CREEK MI 49015

SUSAN J PATRICK MD
181 LAKEWAY DRIVE
BATTLE CREEK MI 49017

ALBERT J PATT MD
154 WEST ST
BATTLE CREEK MI 49017

DONALD J PEARSON MD
255 NORTH AVE
BATTLE CREEK MICH 49017

CLARENCE T PIER MD A
P O BOX 1536
HOLMES BEACH FL 33509

LAWRENCE D PIPE MD
LEILA HOSPITAL
BATTLE CREEK MI 49014

C E POWELL MD A
632 NORTH AVE
BATTLE CREEK MI 49017

DONNA POWELL MD A
V A HOSPITAL
FT CUSTER MI 49016

JOHN R POWER MD
154 WEST ST
BATTLE CREEK MICH 49017

F H REGUALOS JR MD
632 NORTH AVE
BATTLE CREEK MI 49017

WILMA C W RORICH MD R
164 N DIVISION ST
BATTLE CREEK MI 49017

RUSSELL C ROWAN MD
500 S IONIA ST
ALBION MICHIGAN 49224

CLARK W ROYER MD R
10524 TROPICANA CIR
SUN CITY ARIZ 85351

CHAS J RYAN MD
LEILA HOSP
BATTLE CREEK MICH 49014

CHARLES L SEIFERT MD
632 NORTH AVE
BATTLE CREEK MI 49017

PEDRO A SEVIDAL JR MD
1018 NORTH AVE
BATTLE CREEK MI 49014

ARA D SHARP MD R
502 IRWIN ST
ALBION MI 49224

H M SHELLENBERGER MD R
131 W HANOVER
MARSHALL MI 49068

A CLARK SIBILSKY MD A
281 HONEY LANE
BATTLE CREEK MI 49015

ROBT S SIMPSON MD
700 CAPITAL AVE SW
BATTLE CREEK MICH 49015

GEO W SLAGLE MD L
203 CAPITAL AVE NE
BATTLE CREEK MI 49017

RUSSELL T SMITH MD
197 WASHINGTON ST
BATTLE CREEK MI 49017

COLLIS M SPENCER MD
308 1/2 S SUPERIOR ST
ALBION MICH 49224

WENDALL H STADLE MD R
607 JENNINGS LANDING
GOUGAC LAKE

49014

C D STEPHENSON M D
154 WEST ST
BATTLE CREEK MICH 49017

RICHARD A STIEFEL MD
260 WAHWAHTAYSEE WAY
BATTLE CREEK MICH 49015

FRANK J STROHMENGER MD
500 S IONIA ST
ALBION MICHIGAN 49224

CLIFFORD B TAYLOR MD
500 S IONIA ST
ALBION MI 49224

MYRON A TAZELAAR MD
219 N MADISON ST
MARSHALL MICH 49068

HARRY VANDER KAMP MD A
VA HOSPITAL
BATTLE CREEK MICH 49016

LLOYD E VERITY MD R
212 HOURGLASS WAY
SARASOTA FL 33581

GUNNAR VETNE MD
725 CAPITAL SW
BATTLE CREEK MICH 49015

CHAS S WALKER MD L
709 W VAN BUREN ST
BATTLE CREEK MICH 49017

JOHN F WALTERS MD
163 NORTH AVE
BATTLE CREEK MICH 49017

WM D WALTERS MD
P O BOX 1518
BATTLE CREEK MICH 49016

KEITH S WEMMER MD
1472 W MICHIGAN AVE
BATTLE CREEK MICH 49017

SHERWOOD B WINSLOW MD
710 NORTH AVE
BATTLE CREEK MICH 49017

S A YANNITELLI MD
710 NORTH AVE
BATTLE CREEK MI 49017

JOHN R YOUNG MD
719 CAPITAL AVE SW
BATTLE CREEK MICH 49015

MALCOLM C YOUNG MD
P O BOX 1518
BATTLE CREEK MI 49016

R B ZAPLITNY MD
1018 NORTH AVE
BATTLE CREEK MI 49017

SOPHIA ZAPLITNY MD A
1018 NORTH AVE
BATTLE CREEK MI 49017

BERTRAM ZHEUTLIN MD
50 ADAMS ST
BATTLE CREEK MI 49015

GEO A ZINDLER MD
1201 SECURITY BNK BLDG
BATTLE CREEK MICH 49014

CASS

URIAH M ADAMS MD
MARCELLUS MI 49067

RUDOLPH I CLARY MD R
204 JAMAICA WAY
PUNTA GORDA FL 33950

L DAVID COMSTOCK JR MD
417 W HIGH ST
DOWAGIAC MICHIGAN 49047

JUSTO DEVARONA MD
420 W HIGH ST
DOWAGIAC MI 49047

HENRY V GUZZO MD
515 MAIN ST SUITE 1
DOWAGIAC MI 49047

JOHN K HICKMAN MD
P O BOX 226
DOWAGIAC MICH 49047

KENNETH C PIERCE MD
417 W HIGH ST
DOWAGIAC MICHIGAN 49047

LOWELL D SMITH MD
109 SCHOOL ST
CASSOPOLIS MI 49031

AARON K WARREN MD
109 SCHOOL ST
CASSOPOLIS MICHIGAN 49031

CHIPPEWA-MACKINAC

HUGH R ALLOTT MD
816 ASHMUN ST
SAULT STE MARIE MICH 49783

H MILTON BLAIR MD
300 COURT ST
SAULT STE MARIE MICH 49783

CLAIRE H CLAUSEN MD L
1110 LUCERNE AVE
CAPE CORAL FL 33904

WM J COULTER MD
DRUMMOND ISLAND MI 49726

DONALD D FINLAYSON MD
301 E SPRUCE ST
SAULT STE MARIE MI 49783

MARIE A HAGELE MD
126 PARK PL
SAULT STE MARIE MI 49783

HERBERT E HAMEL MD
220 BURDETTE ST
ST IGNACE MI 49781

ROBERT D HEILMAN MD
WAR MEMORIAL HOSP
SAULT STE MARIE MI 49783

DONNELL C HOWE JR MD
300 COURT ST
SAULT STE MARIE MICH 49783

THOS B MACKIE MD
300 COURT ST
SAULT STE MARIE MICH 49783

WM F MERTAUGH MD
104 W SPRUCE ST
SAULT STE MARIE MICH 49783

BENJ T MONTGOMERY MD L
P O BOX 39
SAULT STE MARIE MI 49783

C E REDDICK MD R
P O BOX 355
SAULT STE MARIE MI 49783

EARL S RHIND MD
SAULT POLYCLINIC
SAULT STE MARIE MICH 49783

DALE SCOTT MD
816 ASHMUN ST
SAULT STE MARIE MICH 49783

THOMAS SLOUGH MD
301 E SPRUCE ST
SAULT STE MARIE MI 49783

CHAS F THOMPSON MD L
DRUMMOND ISLAND MI 49726

TONY J TRAPASSO MD
816 ASHMUN
SAULT STE MARIE MICH 49783

ANTON G VENIER MD
816 ASHMUN ST
SAULT STE MARIE MI 49783

ERLING S WEDDING MD
203 HUDSON DR
SAULT STE MARIE MI 49783

CLINTON

GEO W BENNETT MD
203 W MAIN ST
ELSIE MI 48831

BRUNO C COOK MD
WESTPHALIA MI 48894

WELLS B FILLINGER MD L
OVID MI 48866

JAMES M GROST MD
PARK AVENUE
ST JOHNS MI 48879

SHERWOOD R RUSSELL MD
210 E WALKER ST
ST JOHNS MI 48879

VICTOR L SHELINE MD
MEDICAL CENTER
ITHACA MICH 48847

EARL M SLAGH MD
ELSIE MI 48831

WESLEY F STEPHENSON MD
510 E WALKER ST
ST JOHNS MICH 48879

PAUL F STOLLER MD
ST JOHNS MI 48879

DELTA-SCHOOLCRAFT

FRANCIS C ANDERSON MD
218 S 10TH ST
ESCANABA MICH 49829

THEODORE L BASH MD
BARK RIVER MICHIGAN 49807

A BARROSO BERNIER MD R
624 LUDINGTON ST
ESCANABA MI 49829

ROLAND E BERRY MD
ST FRANCIS HOSP
ESCANABA MI 49829

MARY CRETENS MD DIR
DELTA-MENOM HLTH DEPT
DELTA COUNTY BLDG
ESCANABA MI 49829

JAMES R DEHLIN MD
8 S 11TH ST
GLADSTONE MI 49837

DONALD N FITCH MD
DOCTORS PARK
ESCANABA MI 49829

JAMES H FYVIE MD
202 S CEDAR ST
MANISTIQUE MI 49854

E JAMES GORDON MD
117 N 22ND ST
ESCANABA MI 49829

LOUIS P GROOS MD
1015 S 1ST AVE
ESCANABA MICH 49829

RAYMOND HOCKSTAD MD
DOCTORS PARK
ESCANABA MI 49829

OTTO S HULT MD
1005 DELTA AVE
GLADSTONE MICH 49837

JOHN LE MIRE MD
DOCTORS PARK
ESCANABA MI 49829

WILLIAM A LE MIRE MD
1106 FIRST AVE S
ESCANABA MICH 49829

WM A LE MIRE III MD
DOCTOR,S PARK
ESCANABA MI 49829

GEO MANIACI MD
8 SOUTH 11TH ST
GLADSTONE MICH 49837

THOS A MC INERNEY MD
1221 LUDINGTON ST
ESCANABA MICH 49829

CARL J OLSON MD
8 S 11TH ST
GLADSTONE MICH 49837

HOWARD J PARKHURST MD H
315 S EIGHTH
ESCANABA MI 49829

ROBT E RYDE MD
1221 LUDINGTON
ESCANABA MICH 49829

LAWRENCE SELL JR MD
MANISTIQUE CLINIC
MANISTIQUE MI 49854

NIKOLAUS J THEISEN MD
1400 16TH AVENUE S
ESCANABA MI 49829

DUANE L WATERS MD
200 S CEDAR ST
MANISTIQUE MICH 49854

MERLE E WEHNER MD
131 RIVER ST
MANISTIQUE MICH 49854

DICKINSON-IRON

EARL R ADDISON MD
412 SUPERIOR AVE
CRYSTAL FALLS MICH 49920

WM H ALEXANDER MD L
411 EAST C ST
IRON MOUNTAIN MI 49801

DONALD T ANDERSON MD
408 HAMILTON AVE
KINGSFORD MICH 49801

ROBERT ANDERSON MD
DICKINSON MEM CO HOSP
IRON MOUNTAIN MI 49801

GEORGE H BOYCE JR MD A
VA HOSPITAL
IRON MOUNTAIN MI 49801

RALPH E CARLSON MD
500 STEPHENSON AVE
IRON MOUNTAIN MICH 49801

R D CECCONI M D
COMMERCIAL BANK BLDG
IRON MOUNTAIN MICH 49801

JOYCE GENDZWELL MD
805 VULCAN STREET
IRON MOUNTAIN MICH 49801

WM R GLADSTONE JR MD
804 MAIN ST
NORWAY MI 49870

WILLARD N HAYES MD
720 N MAIN ST
NORWAY MICH 49870

WILLIS H HURON MD
106 WEST B ST
IRON MOUNTAIN MICH 49801

LIONEL E IRVINE MD L
BOX 312
IRON RIVER MI 49935

DONALD J JACOBS MD
PROFESSIONAL BLDG
IRON MOUNTAIN MICH 49801

HUGH D MC EACHRAN MD
500 STEPHENSON AVE
IRON MOUNTAIN MICH 49801

JOHN A NEWKIRK MD
PROFESSIONAL GROVE
IRON MOUNTAIN MI 49801

JAMES C NORA MD
15 EIGHTH AVENUE
IRON RIVER MI 49935

ERNEST PIEPER MD
1517 S STEVENSON
IRON MOUNTAIN MICH 49801

RUSSELL C RETALLACK MD
326 W GENESEE ST
IRON RIVER MICH 49935

WARREN J ROBERTS MD A
VA HOSPITAL
IRON MOUNTAIN MI 49801

WALTER A SCHMUTZLER MD
373 WOODWARD ST
IRON MOUNTAIN MICH 49801

JOHN M SCHROEDER MD
212 EAST B ST
IRON MOUNTAIN MICH 49801

DOUGLAS SHERK MD
412 SUPERIOR
CRYSTAL FALLS MICH 49920

DONALD R SMITH MD
BOX 471
IRON MOUNTAIN MICH 49801

LOWELL SOMERS MD
BOX 98
FLORENCE WISCONSIN 54121

CHAS G STEINKE MD
517 STEPHENSON AVE
IRON MOUNTAIN MICH 49801

ROBERT E STELLE MD
701 STATE
CRYSTAL FALLS MI 49920

PAUL L TRUMP MD
COMMERCIAL BANK BLDG
IRON MOUNTAIN MI 49801

ARNOLD WOLLUM MD A
R 1
VULCAN MI 49892

EATON

RICHARD H BERG MD
162 SECOND ST
SUNFIELD MI 48890

BYRON P BROWN MD
541 LANSING ST APT6
CHARLOTTE MI 48813

KEITH L CURTIS MD
202 S COCHRAN
CHARLOTTE MICHIGAN 48813

C LE ROY DE LAND MD

OLIVET MI 49076

PAUL H ENGLE MD A
COLONIAL APARTMENTS
OLIVET MI 49076

O STEWART ERHARD MD
301 RANCHO
EATON RAPIDS MICH 48827

FRED C GARLOCK MD
406 E JEFFERSON ST
GRAND LEDGE MICH 48837

GORDON R HARROD MD

GRAND LEDGE MI 48837

DANIEL D JOSEPH MD
202 S COCHRAN
CHARLOTTE MICHIGAN 48813

ROBERT L LEESER MD
202 S COCHRAN
CHARLOTTE MI 48813

MILTON MARGOLES MD
708 W LAWRENCE
CHARLOTTE MI 48813

ALBERT H MEINKE JR MD
800 CUMBERLAND DR
EATON RAPIDS MICH 48827

ALBERT W MYERS MD

POTTERVILLE MI 48876

S R ROBINSON MD
10551 HAMLET CT R#4
GRAND LEDGE MICH 48837

LESTER G SEVENER MD
236 S MAIN ST
CHARLOTTE MICH 48813

EBER B SHERMAN MD
501 CARLISLE ST
EATON RAPIDS MI 48827

HERMAN F VAN ARK MD
410 BLAKE ST
EATON RAPIDS MI 48827

CLAYTON O WILLITS MD
141 S WASHINGTON
CHARLOTTE MICH 48813

GENESEE

R RODERICK ABBOTT MD
420 S BALLENGER HWY
FLINT MI 48504

ALBERT C ADAMS MD
5210 LAPEER RD
FLINT MI 48503

BURNELL H ADAMS MD
609 S LYNCH ST
FLINT MI 48503

LEROI J ALEXANDER MD
915 W PASADENA
FLINT MI 48504

DONALD J ALLCORN MD
1279 COLDWATER RD
FLINT MI 48505

HARLEY H ANDERSON MD
11820 N SAGINAW
MT MORRIS MICH 48458

JOHN L ANDERSON MD
2765 FLUSHING RD
FLINT MI 48504

RICHARD A ANTELL MD
2733 CRESTWOOD DR
FLINT MICHIGAN 48503

GEO E R ANTHONY MD
912 BEARD ST
FLINT MI 48503

W CLAIRE BAIRD MD
2765 FLUSHING RD
FLINT MICHIGAN 48504

FREDK W BALD MD
410 S BALLENGER
FLINT MI 48504

DAVID A BARBOUR MD
5369 BRIARCREST
FLINT MICHIGAN 48504

FLEMING A BARBOUR MD
2015 LINCOLN DR
FLINT MI 48503

FRANKLIN W BASKE MD
923 MAXINE ST
FLINT MI 48503

JOSEPH T BATDORF MD
8483 HOLLY RD
GRAND BLANC MI 48439

LAWRENCE G BATEMAN MD
1928 LEWIS ST
FLINT MI 48506

MARTIN L BEARD MD
6606 N SAGINAW ST
FLINT MI 48505

DOUGLASS R BECK MD
5445 FERNWOOD DR
FLINT MI 48504

EUGENE B BECKER MD
2849 MILLER RD
FLINT MI 48503

I TURAN BENGISU MD
1615 GENESEE TOWERS
FLINT MI 48502

JACK BENKERT MD
6211 LAKE FOREST DR
GRAND BLANC MICH 48439

JOHN C BENSON MD
639 MOTT FDTN BLDG
FLINT MI 48502

HARRY BERMAN MD
3309 FENTON RD
FLINT MI 48507

GERALD P BERNER MD
2765 FLUSHING RD
FLINT MICHIGAN 48504

ELI N BERNSTEIN MD
1201 FLUSHING RD
FLINT MICHIGAN 48504

J A BEST M D
3801 CLIO RD
FLINT MI 48504

GEO D BEYER MD
G 3337 W VIENNA
CLIO MICHIGAN 48420

LEON M BOGART MD L
503 NATIONAL BLDG
FLINT MI 48502

GREGOIRE BOLDUC MD
325 E FIRST ST
FLINT MICHIGAN 48502

WM P BOLES MD L
714 BEACH ST
FLINT MI 48502

VIRGILIO BONET MD
2765 FLUSHING RD
FLINT MI 48504

DONALD BOSKER MD
1818 LONGWAY BLVD #302
FLINT MI 48506

ROBERT A BOTA MD
1623 MONTCLAIR
FLINT MICHIGAN 48503

PETER R BOYER MD
2510 VERREDIA #103
FLINT MI 48504

ROBT M BRADLEY MD
1112 MOTT FND BLDG
FLINT MI 48502

JOHN L BRADY MD
302 KENSINGTON
FLINT MI 48502

ROY G BRAIN MD L
460 S SAGINAW ST
FLINT MI 48502

HIRA E BRANCH MD
817 MOTT FDTN BLDG
FLINT MICHIGAN 48502

DONALD R BRASIE MD R
R 2 BOX 436
ROSCOMMON MI 48653

GUY D BRIGGS MD L
224 E COURT ST
FLINT MI 48503

CLARENCE A BROWN MD
926 MOTT FDTN BLDG
FLINT MI 48502

HOWARD C BRUCKNER MD
444 BOUTELL
GRAND BLANC MI 48439

DONALD R BRYANT MD
621 MOTT FDN BLDG
FLINT MICHIGAN 48502

GERALD S BUCHANAN MD
3471 GRANGE HALL RD
HOLLY MICH 48442

WM F BUCHANAN MD
238 W CAROLINE
FENTON MICH 48430

LESLIE V BURKETT MD
618 DOUGHERTY PL
FLINT MI 48504

DONALD R CANADA MD
1207 N BALLENGER HWY
FLINT MI 48504

ROBERT R CANAS MD
406 N SAGINAW ST
DURAND MI 48429

NORMAN A CARTER MD
1201 FLUSHING RD
FLINT MI 48504

MYRTON S CHAMBERS MD L
3402 WESTWOOD PKWY
FLINT MI 48503

EUGENE N CHARDOUL MD
202 PATERSON BLDG
FLINT MI 48502

WM D CHASE MD
1318 N BALLENGER HWY
FLINT MI 48504

RONALD CHEN MD
432 N SAGINAW
FLINT MI 48502

JOHN C CHOGICH MD
1245 DUPONT ST
FLINT MI 48504

ROBT L CLARK MD
1301 FLUSHING RD
FLINT MI 48504

GERALD G COLE MD
1818 LONGWAY BLVD
FLINT MI 48501

JAMES I COLLINS MD
G 1128 N DYE ROAD
FLINT MICHIGAN 48504

CLIFFORD W COLWELL MD
328 S SAGINAW ST
FLINT MI 48502

DAVID E CONGDON MD
9190 PINE BLUFF
FLUSHING MI 48433

MCCLELLAN B CONOVER MD
625 S GRAND TRAVERSE
FLINT MI 48503

FRANK W COOK MD
410 S BALLENGER
FLINT MICHIGAN 48504

HENRY COOK MD L
208 GENESEE BANK BLDG
FLINT MI 48502

JOHN L COOK MD
GENESEE BANK BLDG #208
FLINT MI 48502

CORY E COOKINGHAM MD
214 MEDICAL ARTS BLDG
FLINT MICHIGAN 48501

LOUIS B CORIASSO MD
9224 HAPPY HOLLOW CT
GRAND BLANC MI 48439

KENNETH M COYNE MD
325 E FIRST ST
FLINT MICHIGAN 48503

ROBERT L CROSS MD
5221 WOODHAVEN DR
FLINT MICHIGAN 48504

G CAMPBELL CUTLER M D
420 S BALLENGER
FLINT MI 48504

JOHN R DAMM MD
8483 HOLLY RD
GRAND BLANC MI 48439

ROBT C DAVIS MD
G 3029 FLUSHING RD
FLINT MI. 48504

RALPH E DAWSON MD
721 W SIXTH AVE
FLINT MI 48503

JOHN MURRAY DAY MD
1919 GENESEE TOWERS
FLINT MI 48502

NICHOLAS DELZINGRO MD L
328 MAIN ST
DAVISON MI 48423

CARLTON K DETTMAN MD
10512 MCKINLEY RD
MONTROSE MICH 48457

BERNARD DICKSTEIN MD
605 NATIONAL BLDG
FLINT MI 48502

ROY D DIGGS JR MD
4250 N SAGINAW ST
FLINT MI 48505

SAMUEL R DISMOND MD
1402 S SAGINAW ST
FLINT MICHIGAN 48503

MAX E DODDS MD
625 S GRAND TRAVERSE
FLINT MICHIGAN 48503

JAMES F DOOLEY MD
3210 S DORT HWY
FLINT MI 48507

WILLIAM F DWYER MD
625 S GRAND TRAVERSE
FLINT MICHIGAN 48503

RICHARD A DYKEWICZ MD
2744 FLUSHING RD
FLINT MI 48504

WAYNE L EATON MD
1703 CRESCENT DR
FLINT MI 48503

ERNEST M EICHHORN MD
2765 FLUSHING RD
FLINT MI 48504

THOS N EICKHORST MD
2765 FLUSHING RD
FLINT MI 48504

DOUGLAS D EITZMAN MD
2765 FLUSHING RD #302
FLINT MI 48504

MEHMET EKINCI MD
2279 GRAND BLANC RD
GRAND BLANC MI 48439

HARDIE B ELLIOTT MD
503 S SAGINAW ST
FLINT MI 48502

RAYMOND M ENGELMAN MD
2744 FLUSHING
FLINT MI 48504

ALI A ESFAHANI MD
710 MOTT FDTN BLDG
FLINT MI 48502

RALPH D ETTINGER MD
238 W CAROLINE ST
FENTON MICHIGAN 48430

JOHN F FAILING JR MD
HURLEY HOSPITAL
FLINT MICHIGAN 48502

Q C FAN MD
2002 E COURT ST
FLINT MICH 48503

BEN S FARAH MD
2765 FLUSHING RD
FLINT MI 48504

MAYNARD M FARHAT MD
505 W COURT ST
FLINT MICH 48503

MANSON G FEE MD
108 E KEARSLEY ST
FLINT MI 48502

JOSE A FERNANDEZ MD
2510 NERREDIA
FLINT MI 48504

JAMES W FERRIS MD
1005 LEITH ST
FLINT MI 48505

THEO FINKELSTEIN MD
1415 BROADWAY BLVD
FLINT MI 48506

ROBERT E FITCH MD
1005 LEITH
FLINT MI 48505

GRAYDON R FORRER MD
2279 E GRAND BLANC RD
GRAND BLANC MICH 48439

LEON FRIEDMAN MD
2765 FLUSHING RD
FLINT MI 48504

HARVEY T FULLER MD R
2700 N HAYDEN RD
SCOTTSDALE ARIZ 85257

ALBERT J GASIS MD
436 S SAGINAW ST
FLINT MI 48502

GEORGE Z GERRAS MD
1334 N DYE ROAD
FLINT MICHIGAN 48504

JAMES J GIBBONS MD
101 MEDICAL ARTS BLDG
FLINT MI 48501

RUDOLPH GOETZ MD
1221 CHURCH STREET
FLINT MICHIGAN 48503

E MARSHALL GOLDBERG MD
HURLEY HOSPITAL
FLINT MI 48502

EVELYN GOLDEN MD
218 E COURT ST
FLINT MICH 48503

H MAXWELL GOLDEN MD
218 E COURT ST
FLINT MI 48503

SAUL S GORNE MD
619 CLIFFORD ST
FLINT MI 48503

ERNEST P GRIFFIN JR MD
1505 ARROW LANE
FLINT MI 48507

JACK R GROMMONS MD
721 W SIXTH AVE
FLINT MICHIGAN 48503

HAROLD F GROVER MD L
3433 FENTON RD
FLINT MI 48507

GURDON S GUILE MD A
1621 DUPONT ST
FLINT MI 48504

EDWIN H GULLEKSON MD
2765 FLUSHING RD
FLINT MI 48504

C R GUMPPER MD
4437 MORRISH RD
SWARTZ CREEK MICH 48473

GEO L GUNDRY MD L
11736 SAGINAW
GRAND BLANC MI 48439

ISADORE H GUTOW MD
2765 FLUSHING RD
FLINT MI 48504

JULIUS J GUTOW MD
726 CHURCH STREET
FLINT MICHIGAN 48503

ERWIN GUTOWITZ MD
420 S BALLENGER HWY
FLINT MICHIGAN 48504

RICHARD D HACKLEY MD
1818 R T LONGWAY BLVD
FLINT MI 48501

ROBT F HAGUE MD L
2745 LAKEWOOD DR
FLINT MI 48507

JOHN WM HALLITT MD
102 MEDICAL ARTS BLDG
FLINT MI 48501

ROBT H HARPER MD
713 THOMSON ST
FLINT MI 48503

BERNARD J HARRIS MD
1750 LYNBROOK
FLINT MICHIGAN 48507

DONALD R HARRIS MD
2429 WELCH BLVD
FLINT MICHIGAN 48504

FREDK V HAUSER MD
1015 MOTT FNDN BLDG
FLINT MI 48502

JAMES E HAWKINS MD
4618 ROBERTS ST
FLINT MI 48501

PHYLLIS O HELCHER MD
420 S BALLENGER
FLINT MI 48504

ROBERT D HELFERTY MD
1116 ANN ARBOR STREET
FLINT MI 48503

CHARLES R HENNESSY MD
917 MOTT FNDN BLDG
FLINT MICH 48502

HAROLD H HISCOCK MD L
1315 MOTT FDTN BLDG
FLINT MI 48502

THOMAS A HOCKMAN MD
11125 OLD BRIDGE RD
GRAND BLANC MICHIGAN 48439

FRANK V HODGES MD
HURLEY HOSPITAL
FLINT MI 48502

JOHN W HOLLIS MD
MEDICAL DIRECTOR
ASHLAND OIL INC

ASHLAND KY 41101

VIRGIL R HOOPER MD
4230 TRUMBULL
FLINT MICHIGAN 48504

ROBERT J HOUSE MD
5481 SUGARBUSH LANE
FLINT MICHIGAN 48504

WM C HUBBARD MD
302 PATERSON BUILDING
FLINT MICHIGAN 48502

WILFRID L HUFTON MD
2765 FLUSHING RD
FLINT MI 48504

RICHARD J HUNT MD
2025 CRESTBROOK LN
FLINT MI 48507

CLAYTON E HURD MD
205 LINCOLN ST
FENTON MICHIGAN 4843C

LAWRENCE R IRISH MD
6146 SIERRA PASS
FLINT MICHIGAN 48504

ORESTES IUNG MD
625 S GR TRAVERSE ST
FLINT MI 48503

ROBT E JAMES MD
1860 HAMPDEN
FLINT MI 48507

WALTER H JANKE MD
710 MOTT FNDTN BLDG
FLINT MI 48502

A H JOHNSON JR MD R
429 NORTH ST SW #506
WASHINGTON D C 20024

RAYMOND E JOHNSON MD
5173 W REID RD
SWARTZ CREEK MICH 48473

ALVIN E JUDD MD
1620 N FRANKLIN
FLINT MI 48506

PAUL H KARR MD
1818 R T LONGWAY BLVD
FLINT MICHIGAN 48503

LEWIS D KAUFMAN MD
4002 N SAGINAW ST
FLINT MI 48505

JAMES E KELLY MD
2765 FLUSHING RD
FLINT MICHIGAN 48504

DONALD M KENNETT MD
315 BELLA VISTA DR
GRAND BLANC MICHIGAN 48439

C B KIMBROUGH MD
1402 S SAGINAW ST
FLINT MI 48503

O F KLINE MD
2765 FLUSHING RD
FLINT MI 48504

JAMES G KNAGGS MD
500 S GR TRAVERSE ST
FLINT MI 48503

WM D KNAPP MD
503 S SAGINAW ST
FLINT MI 48502

CHESTER S KOOP MD
1372 N BALLENGER HWY
FLINT MICHIGAN 48504

BORIS W KREEL MD
11610 HAZEL ST
GRAND BLANC MI 48439

ARTHUR H KRETCHMAR MD L
481 ST ANDREWS DR
APTOS CALIF 95003

RICHARD J LAUREL MD
1312 S E 31ST ST
CAPE CORAL FLORIDA 33904

CARROLL J LA VIELLE MD
1135 N DYE RD
FLINT MI 48504

J LEONIDAS LEACH MD L
P O BOX 294
FLINT MI 48502

LESLIE L LE MIEUX MD
701 W DAYTON ST
FLINT MI 48504

MARK C LEVINE MD
G3083 FLUSHING RD
FLINT MI 48504

BILLIE LEWIS MD
739 MOTT FDN BLDG
FLINT MICHIGAN 48502

JOHNNY F LEWIS MD A
1318 W GENESEE ST
FLINT MI 48504

THOS E LEWIS MD
4071 RICHFIELD RD
FLINT MICHIGAN 48506

VIVIAN M LEWIS MD
1618 KENSINGTON
FLINT MICHIGAN 48503

ROBT W LIEBER MD
6144 PEBBLESHIRE CIRC
FLINT MICHIGAN 48507

ARTHUR S LIGHTFOOT MD
4500 DETROIT ST
FLINT MICHIGAN 48505

DAVID R LIMBACH MD
900 BEGOLE ST
FLINT MI 48503

THOMAS C LINDMAN M D
2484 NOLEN DR
FLINT MICH 48504

ERNESTO O LIS MD
703 E COURT ST
FLINT MI 48503

JACKSON E LIVESAY MD L
503 S SAGINAW ST
FLINT MI 48502

RICHARD M LUNDEEN MD
3393 CLIO
FLINT MICH 48504

JOHN A LUSK MD
9233 W DAVISON RD
DAVISON MICHIGAN 48423

SYDNEY N LYTTLE MD
1207 N BALLENGER HWY
FLINT MI 48504

J W MAC KENZIE JR MD
4437 MORRISH RD
SWARTZ CREEK MICH 48473

ALBERT J MACKSOOD MD
3169 W PIERSON RD
FLINT MICHIGAN 48504

JOHN M MACKSOOD MD
3169 W PIERSON RD
FLINT MI 48504

JOS A MACKSOOD MD
3169 W PIERSON RD
FLINT MI 48504

WILLIAM E MACKSOOD MD
3169 W PIERSON RD
FLINT MICHIGAN 48504

ALBERT A MACPHAIL MD
3302 HAWTHORNE DR
FLINT MICHIGAN 48503

C H MANGELSDORF MD
G3393 CLIO RD
FLINT MICHIGAN 48504

JOHN T MANWARING MD
G5432 CALKINS RD
FLINT MI 48504

RUBEN J MARCHISANO MD
3507 SUNSET DRIVE
FLINT MI 48503

PAUL J MARKUNAS MD
4002 N SAGINAW ST
FLINT MICH 48505

JAMES A MARTIN MD
812 S ADELAIDE ST
FENTON MICH 48430

HELIO B F MARTINS MD
1179 N BALLENGER
FLINT MI 48504

BERTON J MATHIAS MD
1301 FLUSHING RD
FLINT MI 48504

J D MC ALINDON MD
1423 OX YOKE DR
FLINT MICHIGAN 48504

JUNIUS W MC CLELLAN MD
BUICK MOTOR DIVISION
FLINT MI 48505

EARL J MCGARVAH MD
410 S BALLENGER HWY
FLINT MI 48504

JOHN D MCGRAE JR MD
2433 WELCH BLVD
FLINT MICHIGAN 48504

ALLAN R MCGREGOR MD
G 3337 W VIENNA RD
CLIO MICHIGAN 48420

THOMAS A MC LENNAN MD
913 MOTT FNDTN BLDG
FLINT MI 48502

KENNETH W A MC LEOD MD
6078 WINGED FOOT DR
GRAND BLANC MI 48439

RICHARD J MC MURRAY MD
2765 FLUSHING RD
FLINT MICH 48504

D W MCNAUGHTON MD
2437 PINEWOOD CT
FLUSHING MI 48433

DAVID MC TAGGART M D
625 S GRAND TRAVERSE
FLINT MICHIGAN 48503

H H MENDREK MD
2765 FLUSHING RD
FLINT MI 48504

ROBT M MICHELS MD
2702 FLUSHING RD
FLINT MICHIGAN 48504

RICHARD B MICHELSON MD
2014 ROBT T LONGWAY
FLINT MI 48503

KURT W MIKAT MD
3402 SANTA CLARA CT
FLINT MI 48504

LOREN E MILLER MD
2645 CORUNNA RD
FLINT MI 48503

ANTHONY J MILTICH MD
915 S GRAND TRAVERSE
FLINT MI 48503

JAN C MOELLER MD
3102 WESTWOOD PKY
FLINT MICHIGAN 48503

BEHROUZ MOGHTASSED MD
1818 R T LONGWAY BLVD
FLINT MI 48503

GLENN E MOORE MD
323 W SECOND
FLINT MI 48503

WILLIAM H S MOORE MD
1201 FLUSHING RD
FLINT MI 48504

ALAN L MORGAN MD
3169 W PIERSON RD
FLINT MI 48504

PAUL MORIN MD
1968 MILLER RD
FLINT MICHIGAN 48503

VAUGHN H MORRISSEY MD
101 STOCKDALE ST
FLINT MI 48503

EDWARD C MOSIER MD
1730 OVERHILL DR
FLINT MI 48503

WILLYS F MUELLER MD
13335 PAMONA DR
FENTON MI 48430

E GRANT MURPHY MD
118 MEDICAL ARTS BLDG
FLINT MI 48504

S H NASSAR MD
8483 HOLLY RD
GRAND BLANC MI 48439

ALFRED E NEUFFER MD
5384 TERRITORIAL RD
GRAND BLANC MI 48439

HARRY S NEWMAN MD
P O BOX 948
FLINT MICHIGAN 48501

WM W NICHOLLS MD
806 W SIXTH AVE
FLINT MI 48503

DONALD A NITZ MD
1818 ROBERT T LONGWAY
FLINT MI 48503

DAVID E OJEDA MD
3169 W PIERSON RD
FLINT MI 48504

MARY RUTH OLDT MD
602 S LYNCH ST
FLINT MI 48503

SEYMOUR L OSHER MD
315 E COURT ST
FLINT MI 48503

MARJORIE OTERO MD A
307 SUNNYSIDE DR
FLUSHING MI 48433

RUITSON OUYANG MD
3083 FLUSHING RD
FLINT MI 48504

JOON H PARK MD
1708 GENESEE TOWERS
FLINT MI 48502

BURT A PARLIAMENT MD
5126 DYEHILL COURT
FLINT MI 48504

ARCHIBALD C PFEIFER MD L
9798 PALMETTO CLUB DR
MIAMI FL 33157

LYNN A PHELPS MD
10122 JANAROY CT
GOODRICH MICH 48438

A F PHILLIPS MD
X RAY DEPT HURLEY HOSP
FLINT MICHIGAN 48502

WOODROW H PICKERING MD
1602 BALLENGER HWY
FLINT MI 48504

B PIETRUSZKA MD
5210 LAPEER RD
FLINT MI 48503

WALLACE W PIKE MD
7514 MILLER RD
SWARTZ CREEK MI 48473

ALICE LEE PLATT MD A
5551 TERRITORIAL RD
GRAND BLANC MI 48439

JACK E PORTNEY MD
725 STEVENS ST
FLINT MI 48503

W D POUGNET MD
6155 MAPLE RIDGE
FLINT MI 48504

OTTO J PRESTON MD
300 N CHEVROLET AVE
FLINT MI 48504

JACK R PRICE MD
410 S BALLENGER HWY
FLINT MICHIGAN 48504

RICHARD W PRIOR M D
1266 S LE ROY
FENTON MICHIGAN 48430

F L PURCELL MD
TERNSTEDT PLANT
FLINT MI 48509

JOHN QUIN JR MD
2765 FLUSHING RD
FLINT MI 48504

FOUAD RABIAH MD
1608 GENESEE TOWERS
FLINT MI 48502

HELEN RADCENKO MD
302 W PIERSON RD
FLINT MI 48505

LEONID RADCENKO MD
302 W PIERSON RD
FLINT MI 48505

D S RAO MD
2765 FLUSHING RD #301
FLINT MI 48504

RICHARD L RAPPORT MD
436 S SAGINAW
FLINT MI 48502

ROBERT J RATHBURN MD
1706 LAUREL OAK
FLINT MICH 48507

J MOTT RAWLINGS MD
8505 OLD PLANK RD
GRAND BLANC MI 48439

JOHN H REID M D
1301 FLUSHING RD
FLINT MI 48504

GEORGE H REYE MD
2279 E GRAND BLANC RD
GRAND BLANC MICH 48439

ALAN K RICE MD
2008 ROBT T LONGWAY
FLINT MICHIGAN 48503

GEO F RIETH MD
1406 DAVISON ST
FLINT MI 48506

WM J ROBERSON MD
3455 LIPPINCOTT BLVD
FLINT MI 48507

M L ROBITAILLE MD
2765 FLUSHING RD
FLINT MI 48504

JOHN B ROWE MD
653 SAGINAW ST
FLINT MI 48502

WALTER Z RUNDLES MD
500 GRAND TRAVERSE ST
FLINT MI 48503

CARLOS A SAMPAIO MD
8020 DAVISON RD
DAVISON MICH 48423

RUSSELL G SANDBERG MD
5431 FERNWOOD DR
FLINT MI 48504

FREDK E SANOCKI MD
2700 W COURT ST
FLINT MI 48503

CHAS J SCAVARDA MD
1106 MAXINE
FLINT MICHIGAN 48503

RICHARD K SCHAEFER MD
3248 VAN SLYKE RD
FLINT MI 48507

NELSON S SCHAFER MD
721 W 6TH AVE
FLINT MI 48503

BENTON A SCHIFF MD
323 W 2ND ST
FLINT MI 48503

ROBT W SCHMIDLIN MD
3710 DAVISON RD
FLINT MI 48506

E OSKAR SCHREIBER MD
2765 FLUSHING ROAD
FLINT MI 48504

PAUL E SCHROEDER MD
1673 N CHEVROLET
FLINT MICHIGAN 48504

JOHN M SCHWARTZ MD
1300 N DORT HWY
FLINT MICHIGAN 48506

HEINZ H SCHWARZ
5551 TERRITORIAL RD
GRAND BLANC MI 48439

PHILLIP G SEVEN M D
2301 CUMMINGS
FLINT MICH 48503

GEO D SEYMOUR MD
G7237 N SAGINAW
MT MORRIS MICHIGAN 48458

LEIGHTON O SHANTZ MD
1497 COUNTRY VIEW LANE
FLINT MI 48504

JAMES P SHEEHY MD
503 S SAGINAW ST
FLINT MI 48502

DANL H SHEERAN MD
610 S VERNON AVE
FLINT MI 48503

FREDERICK SHERWOOD MD
1207 N BALLENGER HWY
FLINT MI 48504

LEWIS E SIMONI MD
3210 S DORT HGWY
FLINT MI 48507

SARJIT SINGH MD
839 MOTT FNDTN BLDG
FLINT MI 48502

J BERNARD SLOAN MD
3169 W PIERSON RD
FLINT MI 48504

R H SMALLEY MD
4437 MORRISH RD
SWARTZ CREEK MI 48473

EUGENE C SMITH MD
606 STEVENS
FLINT MICHIGAN 48503

HAROLD O SMITH MD
3769 SUNSET DR
FLINT MICHIGAN 48503

MAURICE J SMITH MD
2801 N SAGINAW ST
FLINT MI 48505

SIDNEY E SMITH MD
5220 PASADENA
FLUSHING MI 48433

BENJ F SNIDERMAN MD
727 BEACH ST
FLINT MI 48502

A E SOLIK MD
1201 FLUSHING RD
FLINT MICHIGAN 48504

FREDRIC M SOMACH MD
2765 FLUSHING RD
FLINT MI 48504

MORRIS L SORKIN MD
718 BEACH ST
FLINT MI 48502

SAML S SORKIN MD
718 BEACH ST
FLINT MI 48502

ALAN J SORSCHER MD
516 W COURT ST
FLINT MI 48503

WARREN E SOUTHALL MD
4250 N SAGINAW ST
FLINT MICHIGAN 48505

HARVEY V SPARKS MD
2765 FLUSHING RD
FLINT MI 48504

RALPH S STEFFE MD
2765 FLUSHING RD
FLINT MI 48504

FLOYD H STEINMAN MD
503 S SAGINAW ST
FLINT MI 48502

PHILIP K STEVENS MD
1116 MOTT FDTN BLDG
FLINT MICH 48502

RUDOLPH W STREAT MD L
8100 DAVISON RD
DAVISON MI 48423

CLAYTON K STROUP MD
2002 E COURT ST
FLINT MI 48503

M R SULLIVAN MD
5352 PEPPERMILL RD
GRAND BLANC MICHIGAN 48439

JAMES K SUTHERLAND MD L
402 E 3RD ST
FLINT MI 48503

GEO D SUTTON MD L
303 W COURT ST
FLINT MI 48503

GENE D TANG MD A
503 S SAGINAW ST
FLINT MI 48502

JOHN W TAUSCHER MD
2016 R T LONGWAY BLVD
FLINT MICHIGAN 48503

WALTER I THEUERLE MD
3117 CLIO RD
FLINT MI 48504

CHARLES A THOMPSON MD
1201 SAN JUAN
FLINT MI 48504

JACK W THOMPSON MD
2702 FLUSHING RD
FLINT MI 48504

PETER S THOMS MD A
1279 W COLDWATER RD
FLINT MICH 48505

ELMER H TOFTELAND MD
2765 FLUSHING RD
FLINT MI 48504

RITA B TOWER MD L
ELMS TRAILER PARK D4
2801 S DORT HWY

FLINT MI 48507

ALLEN F TURCKE MD
1245 DUPONT ST
FLINT MI 48504

MERALD G TURNER MD
G 3169 W PIERSON
FLINT MI 48504

ARTHUR L TUURI MD
MOTT CHILDREN CLINIC
FLINT MICH 48502

VERNON URICH MD
3169 W PIERSON RD
FLINT MICHIGAN 48504

DOUGLAS VANBROCKLIN MD
1300 N DORT HWY
FLINT MI 48506

J D VANBROCKLIN MD
2620 FLUSHING RD
FLINT MI 48504

FREDK W VAN DUYNE MD
2849 MILLER RD
FLINT MICHIGAN 48503

RAYMOND S VAN HARN MD
1402 W COURT ST
FLINT MICHIGAN 48503

S VARJAVANDI MD
3169 W PIERSON RD
FLINT MI 48504

HOWARD L VARNEY MD
1818 ROBT LONGWAY BLVD
FLINT MICHIGAN 48503

ADNAN O VAROL MD
2279 GRAND BLANC RD
GRAND BLANC MI 48439

EDGAR J VAUGHAN MD
319 S BRIDGE ST
LINDEN MICHIGAN 48451

NICHOLAS N VELARDE MD
3083 FLUSHING RD
FLINT MI 48504

L WILLIAM VERGITH MD
2765 FLUSHING RD
FLINT MI 48504

DAVID L VER LEE MD
503 S SAGINAW ST
FLINT MI 48502

V VILLARREAL MD
1374 COUNTRYVIEW LANE
FLINT MI 48504

FRANKLIN V WADE MD
436 S SAGINAW ST #410
FLINT MICHIGAN 48502

CARVER G WALCOTT MD
201 E CAROLINA ST
FENTON MICH 48430

JAMES D WALKER MD
8483 HOLLY RD
GRAND BLANC MI 48439

DANIEL L WALTER MD
9311 ROUND HILL CT
GRAND BLANC MI 48439

RICHARD E WEBER MD
420 S BALLENGER HWY
FLINT MI 48504

ROBT M WEBER MD
3710 DAVISON RD
FLINT MI 48506

WILLIAM J WEBER MD
1201 FLUSHING RD
FLINT MI 48504

JOHN E WENTWORTH MD
420 S BALLENGER
FLINT MI 48504

SOLOMON C WERCH MD
7320 S STATE RD
GOODRICH MI 48438

INGA W WERNESS MD L
220 EAST FOURTH ST
FLINT MI 48503

GEORGE A WEST MD
4250 N SAGINAW
FLINT MI 48505

J D WHEELER M D
118 MEDICAL ARTS BLDG
FLINT MI 48504

CARL H WHITE MD
106 RIVER ST
FENTON MICH 48430

FRANK T WHITE MD
9244 LAPEER RD
DAVISON MI 48423

ROBT H WILLARD MD
718 BEACH ST
FLINT MI 48502

WM S WILLIAMS MD L
12025 S SAGINAW BLDG 7
GRAND BLANC MI 48439

ROBERT E WILLIS MD
6606 N SAGINAW ST
FLINT MICHIGAN 48505

THOS N WILLS MD R
2760 N E 29TH
POMPANO BEACH FL 33064

DALE A WILSON MD
2765 FLUSHING RD
FLINT MI 48504

NAN D WOLCOTT MD R
7506 LAPEER RD
DAVISON MI 48423

MELVYN D WOLF MD
G3083 FLUSHING RD
FLINT MI 48503

GEO W WRIGHT JR MD
6820 CLIO RD
FLINT MI 48504

MYRON G ZEIS MD
718 BEACH ST
FLINT MI 48502

DANIEL M ZELKO MD
4071 RICHFIELD RD
FLINT MICHIGAN 48506

GOGEBIC

SAML G ALBERT MD
103 SUFFOLK ST
IRONWOOD MICH 49938

DONALD L DAVIDSON MD
200 S SOPHIE ST
BESSEMER MICH 49911

JOHN R FRANCK JR MD
401 SUNDAY LAKE
WAKEFIELD MICH 49968

BELA GALLO MD
NEWPORT CLINIC
IRONWOOD MICH 49938

MICHAEL A GERTZ MD
109 E AURORA ST
IRONWOOD MICH 49938

ALLEN C GORRILLA MD
210 SUFFOLK ST
IRONWOOD MI 49938

REX R HARRINGTON JR MD
104 E RIDGE ST
IRONWOOD MICH 49938

M J LIEBERTHAL MD L
124 E GOGEBIC ST
IRONWOOD MI 49938

PAUL R LIEBERTHAL MD L
BOX 400
IRONWOOD MI 49938

LESTER MEDFORD MD
306 SUNDAY LAKE ST
WAKEFIELD MICH 49968

FLORIAN J SANTINI MD
109 E AURORA ST
IRONWOOD MICH 49938

GRAND TRAVERSE-LEELANAU-BENZIE

RICHARD G BARSTOW MD A
2 JASMINE ST
CRESTMOOR PARK
DENVER CO 80220

JOHN R BARTONE MD
217 S MADISON
TRAVERSE CITY MI 49684

JOHN G BEALL MD
1105 E FRONT ST
TRAVERSE CITY MICH 49684

BURDETTE M BERENS MD
KALKASKA MICHIGAN 49646

HARRY M BLOUNT MD
1122 E FRONT ST
TRAVERSE CITY MI 49684

ELLIS S J BOLAN MD
BOX 67
SUTTONS BAY MI 49682

KNEALE M BROWNSON MD
116 CASS ST
TRAVERSE CITY MICH 49684

BENJ B BUSHONG MD R
116 CASS ST
TRAVERSE CITY MICH 49684

THOMAS D CAMPBELL MD
403 STATE ST
TRAVERSE CITY MICH 49684

WM H CARTWRIGHT MD
1105 E FRONT ST
TRAVERSE CITY MICH 49684

FREDK J CHAPIN MD
STATE HOSPITAL
TRAVERSE CITY MI 49684

OSWALD V CLARK MD
1030 SIXTH ST
TRAVERSE CITY MI 49684

THEODORE N CLINE MD
999 6TH
TRAVERSE CITY MICH 49684

WARREN W CLINE MD
999 6TH
TRAVERSE CITY MICH 49684

JOHN F COLEMAN MD
1100 SIXTH ST
TRAVERSE CITY MI 49684

ARTHUR F DUNDON MD
1100 SIXTH ST
TRAVERSE CITY MI 49684

W T EDMONDS MD
CENTRAL MICH
CHILDRENS CLINIC
MUNSON MED CTR
TRAVERSE CITY MI 49684

CLAUDE I ELLIS MD
SUTTONS BAY MI 49682

JACK A FIEBING MD
PO BOX 283
TRAVERSE CITY MICH 49684

THOMAS E FINCH MD
1122 E FRONT ST
TRAVERSE CITY MI 49684

MAX A FINTON MD
P O BOX 368
NORTHPORT MI 49670

WM A FISHBECK MD
127 S MADISON
TRAVERSE CITY MICH 49684

ROGER C FULMER MD
217 S MADISON ST
TRAVERSE CITY MICH 49684

CHAS R HABERLEIN MD
1100 SIXTH ST
TRAVERSE CITY MICH 49684

JAMES W HALL MD
1100 SIXTH ST
TRAVERSE CITY MICH 49684

THOMAS C HALL MD
1100 SIXTH ST
TRAVERSE CITY MI 49684

EARL E HAMILTON MD
530 S UNION ST
TRAVERSE CITY MICH 49684

JEROLD R HARWOOD MD
1100 SIXTH ST
TRAVERSE CITY MI 49684

MILDRED L HERKNER MD A
1206 PENINSULA CT
TRAVERSE CITY MI 49684

READER J HUBBELL MD L
RTE 2 323B
SUTTONS BAY MI 49682

NEVIN HUENE MD
110 E FRONT ST
TRAVERSE CITY MICH 49684

R R HUSTON MD L
ELK RAPIDS MI 49629

ROBERT C JOHNSON MD
116 CASS ST
TRAVERSE CITY MI 49684

JAMES D JOHNSTON MD
1100 SIXTH ST
TRAVERSE CITY MICH 49684

ROBT L KAMP MD
BEULAH MICH 49617

WM W KITTI MD
KALKASKA MI 49646

JAMES A KOLBERG MD
211 S HIGH ST
NORTHPORT MI 49670

SEIICHI KOMESU MD
BOX C
TRAVERSE CITY MICH 49684

CHARLES E LEMEN MD
110 S MADISON
TRAVERSE CITY MICH 49684

KEITH G LIEDING MD
1333 WISTERIA DR
ANN ARBOR MI 48104

LAWRENCE S LOESEL MD
2829 PRINCETON DR
TRAVERSE CITY MI 49684

ROBT T LOSSMAN MD
J DECKER MUNSON HOSP
TRAVERSE CITY MICH 49684

CHARLES T LOUISELL MD
P O BOX 581
TRAVERSE CITY MI 49684

ADAM C MC CLAY M D
217 S MADISON ST
TRAVERSE CITY MICH 49684

WM J MCCOOL MD
1209 E EIGHTH
TRAVERSE CITY MI 49684

MICHAEL D MCMANUS MD
1100 SIXTH ST
TRAVERSE CITY MI 49684

STANLEY L MICHAEL MD
335 DAVIS ST
TRAVERSE CITY MICH 49684

JOHN G MILLIKEN MD
224 CIRCLE DR
TRAVERSE CITY MICH 49684

KENNETH H MUSSON MD
9680 PENINSULA DR
TRAVERSE CITY MI 49684

ROBT E PEARSON MD A
611 BIRCHWOOD AVE
TRAVERSE CITY MI 49684

MAURICE S PELTO MD
MUNSON HOSPITAL
TRAVERSE CITY MICH 49684

WM D PETERSON MD
876 E FRONT ST
TRAVERSE CITY MICH 49684

CLARK D PHELPS MD
540 SIXTH ST
TRAVERSE CITY MI 49684

DONALD G PIKE MD
1209 E 8TH ST
TRAVERSE CITY MICH 49684

E J PONCZEK MD
BOX C STATE HOSPITAL
TRAVERSE CITY MICH 49684

FRANK H POWER MD
116 CASS ST
TRAVERSE CITY MICH 49684

DAYTON SALON MD
1030 6TH ST
TRAVERSE CITY MICH 49684

EDW P SCHEIDLER JR MD
10610 PENINSULA DR
TRAVERSE CITY MI 49684

DWIGHT M SCHROEDER MD
NORTHPORT MICHIGAN 49670

CHARLES W SHIPMAN MD
2040 INDIAN TRAIL BLVD
TRAVERSE CITY MI 49684

L P SKENDZEL MD
MUNSON HOSPITAL
TRAVERSE CITY MICH 49684

M DUANE SOMMERNESS MD
BOX C
TRAVERSE CITY MICH 49684

F T SORUM MD
BOX C
TRAVERSE CITY MICH 49684

JOHN R SPENCER MD
1124 E FRONT ST
TRAVERSE CITY MICH 49684

JOS C STEFFEY MD
116 CASS STREET
TRAVERSE CITY MICH 49684

G EDWARD STOKES MD
1100 SIXTH ST
TRAVERSE CITY MICH 49684

FRED G SWARTZ M D L
612 SIXTH ST
TRAVERSE CITY MI 49684

BERNARD J SWEENEY MD
1100 SIXTH ST
TRAVERSE CITY MICH 49684

FREDK R THACKER MD
FRONT ST
FRANKFORT MICH 49635

LEONARD J THILL MD
BOX C
TRAVERSE CITY MI 49684

RICHARD L THIRLBY MD
228 S MADISON
TRAVERSE CITY MICH 49684

CREIGHTON A WAGENER MD
1100 SIXTH ST
TRAVERSE CITY MICH 49684

JACK E WEIH MD
1105 E FRONT ST
TRAVERSE CITY MICH 49684

HARRY L WEITZ MD
MUNSON HOSP
TRAVERSE CITY MICH 49684

PAUL H WILCOX MD
333 SIXTH ST
TRAVERSE CITY MICH 49684

PHILIP K WILEY MD
116 CASS ST
TRAVERSE CITY MICH 49684

CHAS R WILLIAMS MD
416 SIXTH ST
TRAVERSE CITY MICH 49684

GORDON W WILLOUGHBY MD
104 5TH ST
FRANKFORT MICHIGAN 49635

ROBERT G WONACOTT MD
107 DEXTER ST
ELK RAPIDS MI 49629

J K WRIGHT JR MD
1105 E FRONT ST
TRAVERSE CITY MI 49684

RICHARD E WUNSCH MD
207 CIRCLE DR
TRAVERSE CITY MICH 49684

JOHN HARLEY YOUNG MD
CHILDRENS CLINIC
TRAVERSE CITY MICH 49684

IRWIN H ZIELKE MD
106 S MADISON
TRAVERSE CITY MICH 49684

JOS G ZIMMERMAN MD L
606 N ELMWOOD
TRAVERSE CITY MI 49684

GRATIOT-ISABELLA-CLARE

ALFRED L ALDRICH MD
ITHACA MICH 48847

A ROBERT BAUER JR MD
412 E BROADWAY
MT PLEASANT MICH 48858

ORHAN BAYBURA MD
503 E MAIN ST
EDMORE MI 48829

MYRON G BECKER MD
EDMORE MI 48829

ANDREW V BEDO MD
802 GORDON
MT PLEASANT MI 48858

JOS H BERGIN MD
112 E SUPERIOR
ALMA MICH 48801

PAUL J BRAT MD
245 WARWICK DR
ALMA MI 48801

E J BRENNER MD R
1030 NORTH DRIVE
MT PLEASANT MI 48858

LOREN G BURT MD
510 PROSPECT ST
ALMA MICHIGAN 48801

RAY W CHAMBERLAIN MD
608 E CHIPPEWA
MOUNT PLEASANT MICH 48858

SOUREN L CHAMICHIAN MD
CANAL RD
MT PLEASANT MI 48858

LIONEL L DAVIS MD
117 S KINNEY
MOUNT PLEASANT MICH 48858

DONALD DUNLOP M D
301 EAST FOURTH ST
CLARE MICH 48617

WM F FISHBAUGH JR MD
936 W CENTER
ALMA MICHIGAN 48801

NIKOLA G GEORGIEFF MD
221 EATON ST
BRECKENRIDGE MI 48615

LEMUEL O GRANADA MD
7265 BELLEVUE DR
MT PLEASANT MI 48858

T E HADDAD MD
712 MICHIGAN AVE
ST LOUIS MI 48880

KUNO HAMMERBERG MD
622 MC EWAN
CLARE MICH 48617

WM L HARRIGAN MD R
90TH AVE @ SCH SEC LK
MECOSTA MI 49332

FRANK W HEDGES MD
215 W SAGINAW
ST LOUIS MICHIGAN 48880

WM E HERSEE MD
306 S COLLEGE
MOUNT PLEASANT MICH 48858

A DEANE HOBBS MD R
1506 NE 11TH ST
WINTER HAVEN FL 33880

FRANK D JOHNSON MD A
914 S KINNEY
MT PLEASANT MICH 48858

PHILIP R JOHNSON MD
206 S COLLEGE AVE
MOUNT PLEASANT MICH 48858

ROBERT B JOHNSON MD
R 1
ITHACA MICHIGAN 48847

LE ROY W JUHNKE MD
314 S BROWN ST
MT PLEASANT MI 48858

JAMES D KLAUER MD
COMMUNITY HOSPITAL
MT PLEASANT MICHIGAN 48858

B B KUMAR MD
MT PLEASANT STATE HOME
MT PLEASANT MI 48858

MICHAEL R LINN MD
GRATIOT COMM HOSPITAL
ALMA MI 48801

ALEXSANDRS LUSIS MD R
1105 SNYDER AVE
ANN ARBOR MI 48103

STEWART C MC ARTHUR MD
BOX 32
ROSEBUSH MI 48878

EDWIN G MEYER MD
ALMA MICHIGAN 48801

JOHN J MINSTER MD
314 S BROWN ST
MT PLEASANT MI 48858

DONALD F NAGLER MD
ROUTE 3
MT PLEASANT MI 48858

MARION E NANCE MD
P O BOX 157
WEIDMAN MI 48893

MARTIN M NOSAN MD
1105 KENT DR R#3
MT PLEASANT MI 48858

ROBERT M PATTERSON MD
300 WARWICK DR
ALMA MI 48801

CARLOS A PHILIPPON MD
255 WARWICK DRIVE
ALMA MICHIGAN 48801

HAROLD V RACINE MD
BOX 46
ITHACA MI 48847

RUSSELL M RAGAN MD
505 HIAWATHA DR
MT PLEASANT MI 48858

ROBERT K RANK MD
CENTRAL COMM HOSPITAL
MT PLEASANT MICHIGAN 48858

HAROLD J REESE MD
1100 VERNON DR APT 4
MT PLEASANT MI 48858

RICHARD J REMSBERG DO O
309 STATE ST
ALMA MI 48801

WM J ROTH MD
255 WARWICK DR
ALMA MICHIGAN 48801

JOHN L ROTTSCHAEFER MD
3580 NORTHLAWN PK
ALMA MICH 48801

WILMER M RUTT MD
310 WARWICK DR
ALMA MI 48801

LEWIS F SANDEL MD
245 WARWICK DR
ALMA MI 48801

LINCOLN B SCOTT JR MD
R 3
MT PLEASANT MI 48858

A A SHEPERDIGIAN MD
421 S FANCHER
MT PLEASANT MI 48858

DENNIS V SMITH MD L
1435 CAMBRIDGE RD
ANN ARBOR MI 48104

D A SORIANO MD
1115 WATSON
MT PLEASANT MI 48858

JACK STACK MD
510 PROSPECT
ALMA MICHIGAN 48801

JAMES F TILDEN MD
GRATIOT COMMUNITY HOSP
ALMA MI 48801

ANDREW H VELDHUIS MD
801 GORDON RD
MT PLEASANT MICH 48858

RICHARD L WAGGONER MD
712 MICHIGAN AVE
ST LOUIS MI 48880

C HARRY WALLMAN MD
901 STATE ST
ALMA MICHIGAN 48801

LEO R WICKERT MD
1001 WATSON RD
MT PLEASANT MICH 48858

REX A WILCOX MD
525 STATE ST
ALMA MICH 48801

THEODORE WILL MD
314 S BROWN ST
MT PLEASANT MI 48858

EARL C WILSON MD
HARRISON MI 48625

KENNETH P WOLFE MD
510 PROSPECT AVE
ALMA MI 48801

CORNELIUS B WOOD MD R
ROUTE 2
MT PLEASANT MI 48858

JOHN M WOOD MD
1108 WATSON RD
MT PLEASANT MICH 48858

HILLSDALE

MORTON P BATES MD A
SNOW HLTH CTR EMU
YPSILANTI MI 48197

WILLIAM B DAVIS MD
55 BARRY
HILLSDALE MICHIGAN 49242

LUTHER W DAY MD A
311 E OCEAN AVE
LANTANA FL 33460

EDMOND HENELT MD
32 S BROAD
HILLSDALE MICHIGAN 49242

CHAS L HODGE MD
READING MI 49274

DONALD LARSON MD
165 BUDLONG ST
HILLSDALE MI 49242

JOHN A MAC NEAL MD
379 S BROAD
HILLSDALE MICH 49242

H FRAZYER MATTSON MD
32 S BROAD ST
HILLSDALE MICH 49242

CARL A PETERSON MD A
BOX 46 COCO SOLO
CANAL ZONE

WARD D POWERS MD
JONESVILLE MI 49250

WALTER W SAWYER MD
61 N HOWELL ST
HILLSDALE MICH 49242

CLARK B SMITH MD
252 S HOWELL
HILLSDALE MI 49242

ARTHUR J STEIN MD
144 BUDLONG ST
HILLSDALE MICH 49242

ARTHUR W STROM MD
32 S BROAD ST
HILLSDALE MICH 49242

JOHN TARR MD
CAMDEN MICHIGAN 49232

DONALD G TRAPP MD
32 S BROAD ST
HILLSDALE MICH 49242

CHARLES T VEAR MD
252 S HOWELL ST
HILLSDALE MI 49242

HOUGHTON-BARAGA-KEWEENAW

LEONARD C ALDRICH MD
301 QUINCY ST
HANCOCK MI 49930

JOSEPH F BARON MD
242 IROQUOIS
LAURIUM MI 49913

HONORATO BARRIOS MD
424 QUINCY ST
HANCOCK MICHIGAN 49930

PETER E CARMODY MD
813 LINCOLN DR
HANCOCK MI 49930

HUGO H CASTILLA MD
770 N MAIN ST
L ANSE MICHIGAN 49946

WM R CLARK JR MD
MOYER DIAG CLINIC
BARAGA MI 49908

DAVID H GILBERT MD
146 OSCEOLA ST
LAURIUM MI 49913

PAUL G GOODREAU MD
416 SHELDON AVE
HOUGHTON MI 49931

RAYMOND E HILLMER MD L
RT#5 BOX 518 COPRA LN
FT MYERS FL 33901

ANTON J JANIS MD L
200 EAST ST
HANCOCK MI 49930

FREDK E KOLB MD
128 CALUMET AVE
CALUMET MICH 49913

IVAN A LA CORE MD
RICE MEMORIAL CLINIC
HOUGHTON MICHIGAN 49931

TAMAS O LANCZY MD
BARAGA COUNTY HOSPITAL
LANSE MICHIGAN 49946

FORREST W LARSON MD
322 SHELDEN
HOUGHTON MICH 49931

VICTOR E LEPISTO MD
210 QUINCY ST
HANCOCK MI 49930

MAURICE D MEIER MD
1033 MINE ST
CALUMET MICH 49913

PERCY J MURPHY MD
121 CALUMET AVE
CALUMET MI 49913

HOWARD OTTO MD
ST JOSEPH HOSPITAL
HANCOCK MI 49930

KENNETH L REPOLA MD
400 MAYNARD ST 704
ANN ARBOR MI 48108

ANDREW M ROCHE MD
221 5TH ST
CALUMET MICH 49913

JOHN C ROWE MD
212 FLORIDA ST
LAURIUM MI 49913

KENNETH E ROWE MD
107 1/2 CALUMET AVE
CALUMET MICHIGAN 49913

WILFRED J ROWELL MD R
EAGLE HARBOR MI 49951

PAUL S SLOAN MD
609 SHELDON AVE
HOUGHTON MICH 49931

CARL D SONNEMANN MD
STUDENT HLTH SERV
MICH TECH UNIV
HOUGHTON MI 49931

JOHN A STROUBE MD
522 W THIRD
L ANSE MICH 49946

RUTH M WARING MD
P O BOX 199
CHASSELL MI 49916

T P WARING MD
P O BOX 199
CHASSELL MI 49916

MARSHALL S WILLIAMS MD
ST JOSEPHS HOSPITAL
HANCOCK MICH 49930

HENRY J WINKLER MD
BOX 461
L ANSE MICH 49946

HURON

J N BROUILLETTE MD
106 WILLIS ST
BAD AXE MI 48413

RALPH C DIXON MD
BOX 77
PIGEON MICH 48755

CHAS S ELLIOTT MD
PIGEON MI 48755

C CLARK HERRINGTON MD
117 S PORT CRESCENT
BAD AXE MICHIGAN 48413

K B HERRINGTON MD
317 PORT CRESCENT
BAD AXE MICHIGAN 48413

KENNETH S KUBE MD
BAD AXE MI 48413

J M MULLANEY JR MD
108 S PORT CRESCENT
BAD AXE MICHIGAN 48413

CHAS W OAKES JR MD
HARBOR BEACH MI 48441

ROBERT W OAKES MD
7890 SAND BEACH RD
HARBOR BEACH MI 48441

GORDON R RADY MD
P O BOX 924
PORT HURON MI 48060

CLARE A SCHEURER MD
PIGEON MI 48755

JOSEPH SIDAGIS MD
6 W MAIN ST
SEBEWAING MI 48759

MAURICE G SORENSEN MD
P O BOX
ELKTON MICH 48731

EDWARD E STEINHARDT MD
BAD AXE MI 48413

MANUEL L TEVES MD
119 S SECOND ST
HARBOR BEACH MI 48441

PHILLIP R TURNER MD
230 S FIRST ST
HARBOR BEACH MICH 48441

ROBERT A WILLITS MD
193 N MAIN ST
ELKTON MICHIGAN 48731

INGHAM

CHARLES ADAMS MD
2909 E GRAND RIVER
LANSING MICHIGAN 48912

MAGNUS H AGUSTSSON MD
2025 W HOLMES RD
LANSING MI 48910

DONALD J AIKEN MD
GRANDVIEW & GRAND RV
OKEMOS MICH 48864

REUBEN G ALEXANDER MD
701 N LOGAN ST
LANSING MI 48914

HARRY D ALLIS MD
2909 E GRAND RIVER
LANSING MI 48912

J K ALTLAND MD
ROUTE 2 BOX 178
LANSING MI 48917

DAVID C ASSELIN MD
1322 E MICHIGAN
LANSING MICHIGAN 48912

WALDO D BADGLEY MD
930 N WASHINGTON AVE
LANSING MI 48906

WALTER M BAIRD MD
540 WILDWOOD
EAST LANSING MI 48823

THOS C BAKER MD
930 N WASHINGTON AVE
LANSING MICHIGAN 48906

JOEL M BAMFORD MD M
2132 N CEDAR ST
HOLT MI 48842

ROBT C BASSETT MD
1322 E MICHIGAN AVE
LANSING MI 48912

RICHARD BATES M D
2909 E GRAND RIVER
LANSING MICH 48912

THEODORE I BAUER MD L
810 MICH NAT TOWER
LANSING MI 48933

WM C BEHEN MD L
535 S CAPITOL AVE
LANSING MI 48933

CHARLES A BEHNEY M D L
BOX 4256 SAN JOSE DR
BISBEE AZ 85603

ELEANOR A BERDEN MD
2630 LIBBIE DRIVE
LANSING MI 48917

HANS BERGEEST MD
1980 TAMARISK
EAST LANSING MI 48823

MILTON C BERGEON MD
1021 W DANSVILLE RD
MASON MICH 48854

CHAS J BERGER MD
BOX 1258
LANSING MI 48904

ROLLAND E BETHARDS MD
SPARROW HOSPITAL
LANSING MICHIGAN 48902

FRANK L BEVEZ MD
3209 S CAMBRIDGE RD
LANSING MICH 48910

B WAYNE BINGHAM MD
1034 E SAGINAW
LANSING MI 48906

GERTRUDE C K BLACK MD
529 W GRAND RIVER
WILLIAMSTON MICH 48895

THOMAS C BLAIR MD
1322 E MICHIGAN AVE
LANSING MICHIGAN 48912

EUGENE E BLEIL MD
1322 E MICHIGAN AVE
LANSING MICHIGAN 48912

CARL W BRADFORD MD
832 WESTLAWN
EAST LANSING MICH 48823

ROBT E BRANTLEY MD
SPARROW HOSP X-RAY
LANSING MI 48902

JAMES BRIGGS MD A
BOX 68
HOLT MI 48842

FREDK W BROWN JR MD
831 N WASHINGTON AVE
LANSING MICHIGAN 48906

JOSEPH C BROWN MD A
BOX 68
HOLT MI 48842

M ARTHUR BUDDEN MD
2909 E GRAND RIVER
LANSING MICHIGAN 48912

TERRY E BURGE MD
BOX 68
HOLT MI 48842

MR RICHARD U BYERRUM A
602 WILDWOOD DR
EAST LANSING MI 48823

DONALD A CAIRNS MD
P O BOX 110
MASON MICH 48854

ANTHONY D CALOMENI MD
1850 W MT HOPE
LANSING MICHIGAN 48910

RALPH G CARLSON MD
225 S WAVERLY
LANSING MI 48917

EARL I CARR MD L
1915 MOORES RIVER DR
LANSING MI 48910

JOSEPH A CARUSO MD
701 N LOGAN ST
LANSING MICHIGAN 48915

BYRON L CASEY M D
202 M A C
EAST LANSING MI 48823

MARIAN I G CHASKES MD
701 N LOGAN SUITE 225
LANSING MI 48915

WM D CHENEY MD
SPARROW HOSP X RAY
LANSING MICHIGAN 48902

SEONG H CHI MD
INGHAM MEDICAL HOSP
LANSING MI 48910

JOSEPH R CIPPARONE MD
ST LAWRENCE HOSP
LANSING MICHIGAN 48914

GAIUS D CLARK MD
865 PEBBLEBROOK LN
EAST LANSING MI 48823

WM E CLARK MD
809 E ASH ST
MASON MICH 48854

GEO R CLINTON MD
744 E MAPLE ST
MASON MICHIGAN 48854

FORREST C CLORE MD M

BEVERLY A COLLIER MD
1843 MIRABEAU
OKEMOS MI 48864

RICHARD L COLLIER MD
1843 MIRABEAU
OKEMOS MI 48864

ROBT G COMBS MD
1023 E MICHIGAN AVE
LANSING MI 48912

HOWARD C COMSTOCK MD
2909 E GRAND RIVER
LANSING MI 48912

ILHAN CONKLU MD
720 SECURITIES BLDG
POLK CO MEN HLTH CTR
DES MOINES IOWA 50309

ERRIKOS CONSTANT MD
1200 MICHIGAN AVE
EAST LANSING MI 48823

J MAXWELL COOK MD
3911 W MICHIGAN AVE
LANSING MICH 48917

HENRY E COPE MD R
605 WESTMORELAND
LANSING MI 48915

JEROME F CORDES MD
2909 E GRAND RIVER
LANSING MICHIGAN 48912

GOLDIE CORNELIUSON MD R
3225 E RIVERSIDE DR
RIV GARDEN APT 58-E
FT MYERS FL 33901

DANIEL COWAN MD
DEPT OF PATH MSU
COLLEGE OF HUMAN MED
EAST LANSING MI 48823

JOHN A COWAN MD
CIVIL SERV GROUP INS
HEALTH UNIT
LEWIS CASS BLDG
LANSING MI 48913

DIRECTORY OF MSMS MEMBERS

HAROLD E CROW MD
1215 E MICHIGAN AVE
LANSING MICHIGAN 48912

GORDON D DAUGHARTY MD
2909 E GR RIVER #205
LANSING MI 48912

ROBERT M DAUGHERTY MD
1607 STANLAKE DR
EAST LANSING MI 48823

SANDRA DAUGHERTY MD
DEPT OF MED MSU
EAST LANSING MI 48823

DON G DAVIS
1200 MICHIGAN AVE
EAST LANSING MI 48823

C D DAWE MD
1515 W MT HOPE AVE
LANSING MICHIGAN 48910

JOHN DE BRUIN JR MD
4528 S HAGADORN RD
EAST LANSING MI 48823

CORYDON F DE VRIES MD L
4000 DELTA RIV DR R#1
LANSING MI 48906

MARY J B DEXTER MD A
1082 WILLANA CT
MILAN MI 48160

DONALD J DROLETT MD
1322 E MICHIGAN AVE
LANSING MICHIGAN 48912

LAWRENCE A DROLETT MD
1036 MORRIS AVE
LANSING MI 48917

JOHN F DUNKEL MD
EDW W SPARROW HOSP
LANSING MI 48902

FOREST M DUNN MD
1322 E MICHIGAN AVE
LANSING MICHIGAN 48912

RALPH R EDMINSTER MD
SPARROW HOSP PATH DEPT
LANSING MI 48902

BERTHA W ELLIS MD L
P O BOX 2327
HOLLYWOOD FL 33022

C WARD ELLIS MD L
P O BOX 2327
HOLLYWOOD FL 33022

ALFRED ELLISON JR M D
2909 E GRAND RIVER 202
LANSING MI 48912

ALLEN J ENELOW MD
936 SOUTHLAWN
EAST LANSING MI 48823

KENNETH J FEENEY MD
1908 MICH NATL TOWER
LANSING MI 48933

JAMES S FEURIG MD
321 KENSINGTON ROZD
EAST LANSING MICH 48823

CLYDE R FLORY JR MD
201 W HILLSDALE
LANSING MICHIGAN 48933

ARTHUR LEE FOLEY II MD
DEPT OF ANATOMY MSU
EAST LANSING MI 48823

LEONARD M FOLKERS MD
234 MICHIGAN AVE
EAST LANSING MICH 48823

JOHN D FORBES MD M
301 EFFINGHAM ST
PORTSMOUTH VA 23704

SILVIO P FORTINO MD
2909 E GRAND RIVER
LANSING MICHIGAN 48912

DOUGLAS H FRYER MD
MICH DEPT OF HLTH
LANSING MI 48906

A JOHN GARLINGHOUSE JR
1322 E MICHIGAN AVE
LANSING MICHIGAN 48912

ABRAHAM GELLAR MD
108 DIVISION
EAST LANSING MICH 48823

HARRY C GEORGE MD
909 ABBOTT RD
EAST LANSING MI 48823

RASEM GHANNAM MD
919 CHESTER RD
LANSING MI 48912

L A GINNEBAUGH MD A
2114 1/2 N BOND
SAGINAW MI 48602

ROY E GOLDNER MD L
1318 S WASHINGTON AVE
LANSING MI 48910

FLOYD G GOODMAN MD
4528 S HAGADORN RD
EAST LANSING MI 48823

SIDNEY R GOVONS MD
1322 E MICHIGAN AVE
LANSING MICHIGAN 48912

DAVID GREENBAUM MD
COLLEGE OF HUMAN MED
DEPT OF MED-MSU
EAST LANSING MI 48823

ANNA B GREY MD L
915 CAJON ST
REDLANDS CA 92373

JOHN A HABRA MD
919 CHESTER ROAD
LANSING MI 48912

THERESA B HADDY MD
DEPT OF HUMAN MED-MSU
EAST LANSING MI 48823

JOHN C HALL MD
1319 E MICHIGAN
LANSING MI 48912

R E HAMES MD
1322 E MICHIGAN AVE
LANSING MICHIGAN 48912

ROGER J HANNA MD R
329 E SOUTH ST
MASON MI 48854

LOUIS E HARRINGTON MD
3526 W SAGINAW ST
LANSING MI 48917

HERBERT W HARRIS MD
919 CHESTER RD
LANSING MI 48912

WM H HARRISON MD
834 W ST JOSEPH ST
LANSING MI 48915

JESSE F HARROLD MD
326 W IONIA
LANSING MI 48933

RICHARD L HATTON MD
4462 GREENWOOD ST
OKEMOS MICHIGAN 48864

KENT R HAY MD
1322 E MICHIGAN AVE
LANSING MICHIGAN 48912

ROBT E HAYES MD
1322 E MICHIGAN AVE
LANSING MI 48912

WM D HAYFORD MD
1028 E SAGINAW ST
LANSING MI 48906

GORDON H HEALD MD
714 ABBOTT ROAD
EAST LANSING MICH 48823

FRANK B HECKERT MD
1105 BNK OF LNSG BLDG
LANSING MI 48933

JOS K HECKERT MD L
1105 BNK OF LNSG BLDG
LANSING MI 48933

MARK E HEERDT MD
810 W SAGINAW
LANSING MICHIGAN 48915

DAN M HENSHAW MD
1963 GROTON WAY
EAST LANSING MI 48823

ALBERT E HEUSTIS MD
1111 MICHIGAN AVE
EAST LANSING MI 48823

THOS B HILL MD
554 DURAND ST
EAST LANSING MI 48823

R J HIMMELBERGER MD R
3624 COLCHESTER
LANSING MI 48906

D BONTA HISCOE MD
2909 E GRAND RIVER
LANSING MICH 48912

JACQUE HOCHGLAUBE MD M
1248 52ND ST
TSAWWASSEN BC CANADA

W E HOFFER MD L
331 SHEPARD STREET
LANSING MI 48912

RAYMOND E HOGG MD
2909 E GRAND RIVER
LANSING MICHIGAN 48912

CHAS F HOLLAND MD
810 W SAGINAW
LANSING MICHIGAN 48915

FRANCIS HORVATH MD
2909 E GRAND RIVER
LANSING MI 48912

JOHN C HOYT MD
BOX 66
HOLT MI 48842

CLARE C HUGGETT MD
122 W GD RIVER AVE
LANSING MICHIGAN 48906

DONALD H HULDIN MD
1815 GLEN DR
JACKSON MICHIGAN 49203

ANDREW D HUNT JR MD
COLL OF HUMAN MED MSU
EAST LANSING MI 48823

M S HURTH MD
1717 JEROME ST
LANSING MICH 48912

ELIZABETH W IMESON MD
1809 CAHILL DRIVE
EAST LANSING MI 48823

J L ISBISTER MD
DEPT HEALTH DE WITT RD
LANSING MICH 48906

OMERO S IUNG MD N
516 TICKNER
LINDEN MI 48451

S SPRIGG JACOB III MD
201 ANN ST
EAST LANSING MICH 48823

JOHN S JACOBY MD
2701 FOURTH ST SO
MINNEAPOLIS MINN 55408

PAUL JAKUBIAK MD
1874 PENOBSCOT
OKEMOS MI 48864

BRUCE S JARSTFER MD M
806 CADDINGTON DR
SILVER SPRING MD 20902

HILLIARD JASON MD
OLIN MEM HLTH CTR MSU
EAST LANSING MI 48823

DAVID B JOHNSON MD
2909 E GRAND RIVER
LANSING MICH 48912

GEORGIA A L JOHNSON MD
2608 DARIEN DR
LANSING MI 48912

KENNETH H JOHNSON MD L
1116 MICH NAT TOWER
LANSING MI 48933

LANNY L JOHNSON MD
4528 S HAGADORN RD
EAST LANSING MI 48823

RICHARD JOHNSON MD
2909 E GRAND RIVER 202
LANSING MI 48912

TOM JOHNSON MD
DEPT OF MEDICINE MSU
EAST LANSING MI 48823

FRANCIS A JONES JR MD R
815 ROYAL PALM PL
VERO BEACH FL 32960

LESTER C JONES MD
2909 E GRAND RIVER 203
LANSING MI 48912

MARTIN F JONES MD
2909 E GRAND RIVER
LANSING MICHIGAN 48912

ROBT C JUNE MD
209 N WALNUT
LANSING MI 48933

DAVID KAHN MD
2909 E GRAND RIVER
LANSING MICHIGAN 48912

ROLAND E KALMBACH MD L
1322 E MICHIGAN AVE
LANSING MI 48912

STANLEY KATLEIN MD
2231 HERITAGE
OKEMOS MI 48864

HOWARD H KELLERMAN MD
4423 CALGARY BLVD
OKEMOS MI 48864

WILLIAM KELLY M D
IONIA STATE HOSPITAL
IONIA MI 48846

A EDITH HALL KENT MD L
BOX 1167
LANSING MICHIGAN 48904

HERBERT K KENT MD L
BOX 1167
LANSING MI 48904

FANNY H KENYON MD L
624 LASALLE BLVD
LANSING MI 48912

MOHAMED J KHAN MD
2630 RAPHAEL RD
EAST LANSING MI 48823

RAYMOND C KINZEL MD
326 W IONIA ST
LANSING MICH 48933

THOMAS R KIRK MD
252 HOLLISTER BLDG
DEPT OF PUBLIC HLTH

LANSING MI 48904

JAMES C KLOEPFER MD
2345 INDIAN HILLS DR
OKEMOS MI 48864

D E KNICKERBOCKER MD
1017 E GRAND RIVER
EAST LANSING MI 48823

WM H KNISELY PH D A
P O BOX 7969
UNIV OF TEXAS

AUSTIN TEXAS 78712

ARTHUR F KOHRMAN MD
DEPT OF HUMAN DEV MSU
EAST LANSING MI 48823

JEROME S KOZAK MD
919 CHESTER RD
LANSING MI 48912

LESTER C KRAFT MD
209 S MAIN ST
LESLIE MICH 49251

DONALD H KUIPER MD
DEPT OF MED - MSU
EAST LANSING MI 48823

SOUNG OH KWOUN MD A
INGHAM MEDICAL HOSP
LANSING MI 48910

ROBT E LANDICK JR MD
810 W SAGINAW
LANSING MICHIGAN 48915

JOHN F LANE MD
228 ORCHARD ST
EAST LANSING MI 48823

PHILIP F LANGE MD
1302 PERSHING DRIVE
LANSING MI 48910

HELEN E P LANTING MD
431 GLENMOOR #201
EAST LANSING MI 48823

PAUL E LARKEY MD
110 N ROSEMARY ST
LANSING MICHIGAN 48917

HOMER I LARSON MD
1322 E MICHIGAN AVE
LANSING MI 48912

VIRGINIA D LAUZUN MD
1654 E GRAND RIVER
EAST LANSING MICH 48823

DON M LE DUC MD
1322 E MICHIGAN AVE
LANSING MICH 48912

JOS C LESHOCK MD
701 N LOGAN ST
LANSING MICHIGAN 48915

EDW B LEVERICH MD
909 ABBOTT RD
EAST LANSING MI 48823

HARRY L LEVETT MD
2909 E GRAND RIVER AVE
LANSING MICHIGAN 48912

ALVIN LEWIS MD
358 GILTNER HALL-MSU
EAST LANSING MI 48823

CLAYTON LEWIS JR MD
2909 E GRAND RIVER
LANSING MICHIGAN 48912

PAUL C LINNELL MD
1200 MICHIGAN AVE
EAST LANSING MI 48823

DONALD L LIPSEY MD
INGHAM MEDICAL HOSP
LANSING MI 48910

AQUILES G LIRA MD
118 FOREST
NILES MI 49120

JOSE J LLINAS MD
INGHAM MED HOSPITAL
LANSING MICHIGAN 48910

GUSTAV M LO MD
701 N LOGAN #515
LANSING MI 48915

CHAS D LONG JR MD
2909 E GRAND RIVER
LANSING MICHIGAN 48912

MAURICE C LOREE MD
1531 ABBOTT RD
EAST LANSING MI 48823

HARRY J LOUGHRIN MD
1005 ABBOTT RD
EAST LANSING MI 48823

KAARE LOVOLL MD
1028 E SAGINAW
LANSING MICHIGAN 48906

THOS A LUCAS MD
1515 W MT HOPE
LANSING MICHIGAN 48910

LEWIS C LUDLUM MD
1126 W SAGINAW ST
LANSING MI 48915

EDWARD J LYNN MD
MSU DEPT - PSYCHIATRY
EAST LANSING MI 48823

HENRY E MALCOLM MD
1322 E MICHIGAN
LANSING MI 48912

W E MALDONADO MD
SPARROW HOSPITAL
LANSING MICHIGAN 48902

MARIA B MANDELSTAMM MD
4583 COMANCHE DR
OKEMOS MI 48864

L R MANNAUSA MD
1200 MICHIGAN AVE
EAST LANSING MI 48823

WAYNE D MARTIN MD
4765 NAKUMA DR
OKEMOS MICH 48864

M FINETTE MARZOLF MD N
3315 WISCONSON NW
WASHINGTON DC 20016

E MAVROMATIS MD
1322 E MICHIGAN AVE
LANSING MICHIGAN 48912

F MAVROMATIS MD
1322 E MICHIGAN AVE
LANSING MICHIGAN 48912

STEPHEN G MAY MD
202 M A C AVENUE
EAST LANSING MI 48823

C RAY MC CORVIE MD L
525 NE HAYWORTH RD
PORT CHARLOTTE FL 33950

DONALD R MC CORVIE M D
WILLIAMSTON MED BLDG
WILLIAMSTON MICH 48895

LELAND R MC ELMURRY MD
209 N WALNUT ST
LANSING MI 48933

DONALD R MCFARLANE MD
1322 E MICHIGAN AVE
LANSING MI 48912

D B MC GILLICUDDY MD L
1816 MICH NATL TOWER
LANSING MI 48933

MARVIN J MCKENNEY MD
1200 MICHIGAN AVE
EAST LANSING MI 48823

B EDWARD MC NAMARA MD N
BOX 248
FAIRPLAY CO 80440

WM H MEADE MD
1023 E MICHIGAN
LANSING MICHIGAN 48912

RICHARD K MEINKE MD
1322 E MICHIGAN AVE
LANSING MICHIGAN 48912

RICHARD C MELICK MD
326 W IONIA
LANSING MI 48933

WALTER E MERCER MD R
909 GLENHAVEN
EAST LANSING MI 48823

A L MESSENGER MD
1322 E MICHIGAN AVE
LANSING MICHIGAN 48912

J T MILLER JR MD M
4307 ROBERT CT USNR
WHEATON MD 20906

WILLARD J MILLER MD
225 S WAVERLY RD
LANSING MICH 48917

V JEROME MIRKIL MD
P O BOX 95
HOLT MI 48842

ELBA MOLINA PUNG MD
SPARROW HOSPITAL
OUTPATIENT CLINIC

LANSING MI 48912

ROBT N MONFORT MD R
300 PACIFIC RD
MIAMI FL 33149

CHARLES R MOORE MD
1322 E MICHIGAN AVE
LANSING MICHIGAN 48912

DONALD B MOORE MD
1322 E MICHIGAN AVE
LANSING MI 48912

ROBT J MORROW MD R
741 S W 2ND ST
BOCA RATON FL 33432

EUGENE C NAKFOOR MD
1320 S GENESEE DR
LANSING MI 48915

JAMES C NEERING MD
1322 E MICHIGAN AVE
LANSING MI 48912

JOHN R NEUMAN MD
225 S WAVERLY RD
LANSING MICHIGAN 48917

A W NEWITT MD L
4926 PLUM HOLLOW
LANSING MI 48917

BARNABAS NEWTON MD
401 W GREENLAWN
LANSING MI 48910

MILDRED V NICHOLAS MD R
5596 PORTAGE LAKE RD
DEXTER MICHIGAN 48130

PAUL T NILAND MD
1322 E MICHIGAN AVE
LANSING MI 48912

PAUL J OCHSNER MD R
4741 THORNAPPLE LN
LANSING MI 48917

KI WHAN OH MD
401 W GREENLAWN
LANSING MI 48910

PEDRO OJEDA MD
701 N LOGAN SUITE 212
LANSING MI 48915

FREDRIC J O NEILL MD
1322 E MICHIGAN #112
LANSING MI 48912

WM G PAINE MD
1028 E SAGINAW ST
LANSING MICHIGAN 48906

R E PALMER M D L
1627 WILDWOOD RD
CLEARWATER FL 33516

EARL E PARKER MD
207 E BELLEVUE
LESLIE MICH 49251

THOMAS C PAYNE MD
2909 E GRAND RIVER AVE
LANSING MICHIGAN 48912

RONALD PEETS M D
GR RIVER & GRANDVIEW
OKEMOS MICH 48864

ROBERT A PERRY MD
701 N LOGAN
LANSING MI 48915

JOHN F PLANT MD
2909 E GRAND RIVER
LANSING MICHIGAN 48912

WM H PLESSCHER MD
1322 E MICHIGAN AVE
LANSING MICHIGAN 48912

RICHARD W POMEROY MD
SPARROW HOSP
LANSING MI 48912

LUIS POSADA MD
1322 E MICHIGAN #214
LANSING MI 48912

GERALD D POWELL MD
1850 W MT HOPE
LANSING MI 48910

DONALD R QUIGLEY MD
701 N LOGAN ST
LANSING MI 48915

MAURICE S REIZEN MD
3500 NO LOGAN
MICH DEPT PUBLIC HLTH

LANSING MI 48906

EDWARD E REYNOLDS MD
RT 2 BOX 18
WILLIAMSTON MICH 48895

R G RICE MD
3500 N LOGAN ST
LANSING MICHIGAN 48914

FRANK D RICHARDS MD
1322 E MICHIGAN AVE
LANSING MICHIGAN 48912

EDWARD L RINGER MD
320 TOWNSEND ST
LANSING MI 48933

THOMAS H ROBINSON MD
PO BOX 204
LANSING MICHIGAN 48901

EDMUND J ROBSON MD
701 N LOGAN
LANSING MI 48915

LEOPOLDO RODRIGUEZ MD
810 W SAGINAW ST
LANSING MI 48915

ROBT A ROLLSTIN MD
1014 TOWNSEND ST
LANSING MI 48933

LIONEL W ROSEN MD
DEPT OF PSYCHIATRY-MSU
EAST LANSING MI 48823

RALPH H RUHMKORFF MD R
1060 GLENHAVEN
EAST LANSING MICH 48823

SAML H RUTLEDGE JR MD
1322 E MICHIGAN AVE
LANSING MI 48912

MARY HARMON RYAN MD
2377 SEMINOLE DR
OKEMOS MI 48864

HUGO R SAENZ MD
1515 W MT HOPE
LANSING MICHIGAN 48910

JAMES H SAKER MD
201 W HILLSDALE ST
LANSING MICHIGAN 48933

CHARLES H SANDER MD
DEPT OF PATHOLOGY MSU
EAST LANSING MI 48823

IAN SAYANI MD
4792 NAKOMA DRIVE
OKEMOS MI 48864

J F SCALLIN M D
810 W SAGINAW
LANSING MICH 48915

R RUDOLPH SCHEIDT MD
201 W HILLSDALE
LANSING MICHIGAN 48933

HARRY J SCHMIDT MD
2909 E GRAND RIVER
LANSING MICHIGAN 48912

ARTHUR E SCHULTZ MD
2700 MT HOPE
OKEMOS MICH 48864

JAMES S SCOTT MD
607 TURNER ST
DEWITT MI 48820

HYMAN D SHAPIRO MD
1327 E MICHIGAN AVE
LANSING MICH 48912

MAHLON S SHARP MD
2909 E GRAND RIVER
LANSING MI 48912

MILTON SHAW MD L
320 TOWNSEND ST
LANSING MI 48933

JOSEPH L SHEETS MD
2909 E GRAND RIVER
LANSING MI 48912

GEO A SHERMAN MD L
504 COWLEY
EAST LANSING MI 48823

HARPER G SICHLER MD R
1476 STONEGATE LANE
EAST LANSING MI 48823

DAVID SIEGEL MD
2909 E GRAND RIVER
LANSING MICH 48912

ROMULO E SILVA MD
209 N WALNUT
LANSING MI 48933

IRVING E SILVERMAN MD
2909 E GRAND RIVER
LANSING MICHIGAN 48912

WILLIAM J SINCLAIR MD
1200 MICHIGAN AVE
EAST LANSING MI 48823

JUSTIN L SLEIGHT MD
2909 E GRAND RIVER
LANSING MICHIGAN 48912

ANTHONY V SMITH MD
116 W SYCAMORE
MASON MICH 48854

BERNARD H SMOOKLER MD
2909 E GRAND RIVER
LANSING MICHIGAN 48912

LE MOYNE SNYDER MD R
PO BOX S
PARADISE CA 95969

RUTH C E SNYDER MD
234 W MICHIGAN AVE
EAST LANSING MICH 48823

ALFRED J SPAGNUOLO MD
1418 S LOGAN ST
LANSING MICHIGAN 48910

J CLYDE SPENCER MD
SPARROW HOSPITAL
LANSING MICHIGAN 48902

PERRY C SPENCER MD
320 TOWNSEND ST
LANSING MI 48933

ARTHUR L STANLEY MD
401 W GREENLAWN
LANSING MICHIGAN 48910

ABRAHAM A STEINER MD R
ROUTE 3
GRAND LEDGE MI 48837

WINTON E STEPHAN MD
452 TULIP TREE LANE
EAST LANSING MI 48823

GEO D STILWILL MD
2909 E GRAND RIVER
LANSING MICHIGAN 48912

PAUL R STIMSON MD
119 E GRAND RIVER
EAST LANSING MICH 48823

BENJ J STONE MD
1005 ABBOTT RD
EAST LANSING MI 48823

ROBT M STOW MD
2909 E GRAND RIVER
LANSING MICHIGAN 48912

WALTER F STREMPEK MD
MICH DEPT PUB HLTH
3500 N LOGAN
DIV OF ADULT HLTH
LANSING MI 48906

C J STRINGER MD R
425 WALBRIDGE
EAST LANSING MI 48823

LEIF G SUHRLAND MD
DEPT OF MED MSU
EAST LANSING MI 48823

EDWIN C SUNDELL MD
1322 E MICHIGAN AVE
LANSING MICHIGAN 48912

FREDK C SWARTZ MD
720 SEYMOUR STREET
LANSING MICHIGAN 48906

SCOTT N SWISHER JR MD
DEPT OF MEDICINE MSU
EAST LANSING MI 48823

FREDK W TAMBLYN MD
909 ABBOTT RD
EAST LANSING MI 48823

D W THADEN MD
909 ABBOTT RD
EAST LANSING MI 48823

ROBT F THIMMIG MD
1322 E MICHIGAN AVE
LANSING MI 48912

HSIN CHEN TIEN MD
701 N LOGAN ST
LANSING MI 48915

FREDK C TRAGER MD
1322 E MICHIGAN AVE
LANSING MI 48912

ROBT F TRESCOTT MD
1322 E MICHIGAN AVE
LANSING MICHIGAN 48912

ROBT H TRIMBY MD
1322 E MICHIGAN AVE
LANSING MICHIGAN 48912

FRANKLIN L TROOST MD L
4378 W DELHI RD
HOLT MICH 48842

PAUL C TURNER MD
2909 E GRAND RIVER 203
LANSING MI 48912

EVA URBAN MD
540 GLENMOOR
EAST LANSING MICH 48823

T P VANDERZALM MD L
1452 CAMBRIDGE RD
LANSING MI 48910

CAROL VARNER MD
OKEMOS MEDICAL BLDG
OKEMOS MICHIGAN 48864

HUBERT P VELTEN MD
1394 RED LEAF LN
EAST LANSING MI 48823

JOS H VENIER MD
1628 HITCHING POST RD
EAST LANSING MI 48823

DOUGLAS F WACKER MD
1323 E MICHIGAN
LANSING MI 48912

RALPH WADLEY MD
HARBOR SPRINGS MI 49740

LEO W WALKER MD
4225 APPLE TREE LANE
LANSING MICHIGAN 48917

PETER WAYS MD
830 S JEFFERSON
SAGINAW MI 48601

WM B WEIL JR MD
DEPT OF HUMAN DEV MSU
EAST LANSING MI 48823

JOHN M WELLMAN MD
1236 WOODCREST LANE
EAST LANSING MI 48823

ARNOLD WERNER MD
DEPT OF PSYCHIATRY MSU
EAST LANSING MI 48823

CHAS CARL WEST MD
2909 E GRAND RIVER
LANSING MICH 48912

W DONALD WESTON JR MD
DEPT OF PSYCHIATRY-MSU
EAST LANSING MI 48823

JOHN G WIEGENSTEIN MD
ST LAWRENCE HOSP
LANSING MI 48914

K R WILCOX JR MD
MICH DEPT OF HEALTH
LANSING MICHIGAN 48906

STEPHEN P WILENSKY MD
ST LAWRENCE HOSP
LANSING MI 48914

THOS WILENSKY MD
701 N LOGAN ST
LANSING MICHIGAN 48915

D BRUCE WILEY MD L
921 COOLIDGE APT 3
LANSING MI 48912

HOWARD S WILLSON MD L
1052 MICH NAT L TOWER
LANSING MI 48933

RALPH WORTHINGTON MD
810 W SAGINAW
LANSING MI 48915

CHAS K WORTLEY MD
1200 E MICHIGAN AVE
EAST LANSING MI 48823

JOHN H WYLIE JR MD
2243 W GRAND RIVER AVE
OKEMOS MI 48864

KARL F YOSHONIS MD
1322 E MICHIGAN AVE
LANSING MI 48912

GERALD A ZICK MD
1322 E MICHIGAN AVE
LANSING MI 48912

LUTHER H ZICK MD
1023 E MICHIGAN
LANSING MI 48912

HERMANN A ZIEL JR MD
MICH DEPT OF HEALTH
LANSING MICHIGAN 48906

IONIA-MONTCALM

D HESS ANDERSON MD
207 BRIDGE ST
PORTLAND MICH 48875

LEANDRE I BAUTISTA MD
910 E LINCOLN AVE
IONIA MI 48846

W BRUCE BENNETT MD
LAKEVIEW HOSPITAL
LAKEVIEW MICHIGAN 48850

WM L BIRD MD
917 W OAK ST
GREENVILLE MICHIGAN 48838

ALFREDS A BIRZGALIS MD
IONIA STATE HOSP
IONIA MICH 48846

JACK H BUCK MD
517 DIVISION
IONIA MICHIGAN 48846

LEO W BUNCE MD
TRUFANT MI 49347

RICHARD E CAMPBELL MD
104 S KIDD
IONIA MICH 48846

CESAR H COLON BONET MD
LAKEVIEW MDCL CTR
LAKEVIEW MI 48850

LLOYD S DUNKIN MD L
410 S CLAY ST
GREENVILLE MICH 48838

JOS C FOUST MD
320 UNION ST
IONIA MI 48846

JOHN HALICK MD
200 S FRANKLIN
GREENVILLE MI 48838

CARL M HANSEN MD
STANTON MI 48888

ROBT H HASKELL MD L
ZETLANDS ESTATE TWR
NEVIS LEEWRD ISL BWI

GLENN W HOUSE JR MD
1200 W OAK ST
GREENVILLE MICH 48838

NIKOLAS KAZMERS MD
LAKEVIEW MI 48850

JOS KOPCHICK MD
MUIR MI 48860

MARTIN J KOZACHIK MD
123 BRIDGE ST
PORTLAND MICH 48875

JOHN L LONDON MD
LAKEVIEW MEDICAL CTR
LAKEVIEW MI 48850

LEO L MARSTON MD
BOX 235
LAKEVIEW MICH 48850

FRANK A MERCHUN MD
11804 W CARSON CITY RD
GREENVILLE MICHIGAN 48838

HAROLD C MITCHELL MD R
BOX 3175
NALCREST FLORIDA 33856

JEKABS NAGLINS MD
IONIA STATE HOSP
IONIA MICH 48846

BRUCE C OLSEN MD
917 W OAK ST
GREENVILLE MICHIGAN 48838

R J O MALLEY MD
310 MAIN ST
IONIA MICHIGAN 48846

DON C PATES MD
2500 EASTMONT CT
ALAMOGORDO N M 88310

ROBT E RICE MD
420 S BOWER ST
GREENVILLE MI 48838

PERRY C ROBERTSON MD L
327 CENTER ST
IONIA MI 48846

G JAY ROTTMAN MD
6413 N LAFAYETTE
GREENVILLE MICHIGAN 48838

MILTON E SLAGH MD
SARANAC MI 48881

ROBT D SMITH MD
910 E LINCOLN AVE
IONIA MI 48846

EDMUND S SOCHA MD
NO STATE ST
IONIA MICH 48846

CHARLES E STEVENS MD
513 N LAFAYETTE ST
GREENVILLE MICH 48838

JOHN F TANNHEIMER MD
525 LAFAYETTE ST
IONIA MICH 48846

AHMAD YOUNIS MD
1205 W OAK ST
GREENVILLE MICHIGAN 48838

JACKSON

ELLIS W ADAMS MD
720 W FRANKLIN
JACKSON MICHIGAN 49201

J H AHRONHEIM MD
569 WILDWOOD AVE
JACKSON MICH 49201

DUANE M ALLEN MD
HANOVER MEDICAL CTR
HANOVER MICHIGAN 49241

SAUL APPEL MD
112 W MICHIGAN AVE
JACKSON MICH 49201

TURAN ARGUN MD
762 W MICHIGAN AVE
JACKSON MI 49201

JAMES C ASKINS MD
214 N WEST AVE
JACKSON MI 49201

BURHAN C BABACAN MD
569 WILDWOOD AVE
JACKSON MI 49201

GEO M BAKER MD
350 S UNION
PARMA MICH 49269

SIDNEY A BECKWITH MD
100 E MAIN ST
STOCKBRIDGE MICH 49285

JACK P BENTLEY MD
2532 SPRING ARBOR RD
JACKSON MICH 49203

MARY E N BENTLEY MD
2532 SPRING ARBOR RD
JACKSON MICH 49203

JERRY B BOOTH DDS A
123 N WEST AVE
JACKSON MI 49201

ZANE A BRASHARES MD
BROOKLYN MI 49230

G R BULLEN MD L
418 THIRD ST
JACKSON MI 49201

ROBERT C BUSLEPP MD
901 REYNOLDS BLDG
JACKSON MICHIGAN 49201

F T CELIS MD
766 W MICHIGAN AVE
JACKSON MI 49201

CORWIN S CLARKE MD L
HACINDA CARMEL
CARMEL CA 93921

JAMES D CLIFFORD MD
1514 FOURTH ST
JACKSON MI 49203

CHAS W COOLEY MD
MERCY HOSP
JACKSON MICH 49201

CECIL CORLEY MD L
1310 GREENWOOD
JACKSON MI 49203

ENNIS H CORLEY MD L
3923 KATHMAR DR
JACKSON MICH 49203

ROBT W CORLEY MD
1310 GREENWOOD
JACKSON MI 49203

BYRNE M DALY M D
569 WILDWOOD AVE
JACKSON MICHIGAN 49201

BRUCE DAVENPORT MD
612 FIRST ST
JACKSON MI 49203

CUTHBERT E DE MAY MD L
901 ALBRIGHT DR
JACKSON MI 49203

JOHN D DE MAY MD
403 E MICHIGAN AVE
JACKSON MI 49201

RICHARD C DEMING MD
724 W FRANKLIN
JACKSON MICH 49201

H K FILIP MD
502 LANSING AVE
JACKSON MI 49201

ROBT E FINTON MD
608 W MICHIGAN AVE
JACKSON MICH 49201

HUGH B FOLEY MD
MERCY HOSP PATHOLOGY
524 LANSING AVE
JACKSON MI 49201

HARRY GREENBAUM MD
1203 GREENWOOD AVE
JACKSON MI 49201

BOWERS H GROWT MD L
ADDISON MI 49220

HILDA A HABENICHT MD
545 LANSING AVE
JACKSON MICH 49201

THOS L HACKETT MD
519 N EAST AVE
JACKSON MI 49202

GEO C HARDIE MD L
724 W MICHIGAN
JACKSON MICH 49201

HOWARD C HOFFMAN MD
612 FIRST ST
JACKSON MI 49203

JOHN B HOLST MD
606 CITY BANK BLDG
JACKSON MICH 49204

ROLAND IMPERIAL MD
843 HAZELWOOD
JACKSON MI 49203

LARRY E JENNINGS MD
766 W MICHIGAN AVE
JACKSON MI 49201

WM A JOERIN MD
720 W FRANKLIN ST
JACKSON MI 49201

HENRY A KALLET MD
FOOTE MEMORIAL HOSP
JACKSON MI 49201

JEAN P KARR MD
1615 CARLTON BLVD
JACKSON MI 49203

ALBERT H KEEFER MD
CONCORD MI 49237

CLIFFORD E KEELER MD
612 FIRST ST
JACKSON MI 49203

A J KIESSLING JR MD
511 S WEST AVE
JACKSON MICH 49203

BRUCE F KNOLL MD
766 W MICHIGAN
JACKSON MI 49201

ROBT J KOBS MD
720 W FRANKLIN ST
JACKSON MICHIGAN 49201

BOLESLAW KRAWCZYCK MD
P O BOX 270
HUDSON MI 49247

EDWARD C LAKE MD
720 W FRANKLIN ST
JACKSON MICH 49201

CANL LANDRON MD
4633 PAGE
MICHIGAN CENTER MI 49254

WILLIAM R LATCHAW MD
4000 COOPER ST
JACKSON MICHIGAN 49201

CHAS R LENZ JR MD
405 1ST ST
JACKSON MICH 49201

ELMORE F LEWIS MD L
1112 CARLTON BLVD
JACKSON MI 49203

FREDDY G LIM MD
1310 GREENWOOD
JACKSON MI 49203

VICTOR E LINDEN MD
2025 FOURTH ST
JACKSON MICHIGAN 49203

JOHN E LUDWICK MD L
1112 BERMUDA AVE
KISSIMMEE FL 32741

JOHN P LUDWICK MD
237 W WASHINGTON
JACKSON MI 49201

GERALD I MAAS MD
1310 GREENWOOD AVE
JACKSON MICHIGAN 49203

WM E MC GARVEY MD L
161 W MICHIGAN AVE
JACKSON MI 49201

JOHN M MC LAUGHLIN MD
710 S BROWN ST
JACKSON MICH 49203

MIAR J MC LAUGHLIN MD L
710 S BROWN ST
JACKSON MI 49203

H B MC LAUTHLIN MD
1123 S BROWN ST
JACKSON MICH 49203

F P MC QUILLAN MD
611 CENTER ST
JACKSON MICHIGAN 49202

JASON B MEADS MD L
161 W MICHIGAN AVE
JACKSON MI 49201

ROBT E MEDLAR MD
719 SEVENTEENTH ST
JACKSON MICH 49203

A J MICHAUD MD
1310 GREENWOOD
JACKSON MI 49203

LORENZO MORELLI MD
401 W PROSPECT ST
JACKSON MICH 49203

RALPH A MUHICH MD
2532 SPRING ARBOR RD
JACKSON MICH 49203

NATHAN D MUNRO MD
740 W MICHIGAN AVE
JACKSON MICH 49201

BERNARD M MURPHY MD
770 BLOOMFIELD BLVD
JACKSON MICH 49201

RAY E NEWTON MD L
180 W MICHIGAN AVE
JACKSON MI 49201

HAROLD NIEKAMP MD
762 W MICHIGAN AVE
JACKSON MI 49201

STANLEY P OLEKSY MD
744 W MICHIGAN
JACKSON MICH 49201

LLOYD L OLSEN MD R
1410 W WASHINGTON
JACKSON MICHIGAN 49205

J GIL O ROURKE MD
610 N WEST AVE
JACKSON MI 49202

HAROLD L OSTER MD
1514 FOURTH ST
JACKSON MI 49203

GRANT L OTIS MD
525 WILDWOOD AVE
JACKSON MICH 49201

MUSTAFA C OZ MD
1700 WOODBRIDGE
JACKSON MI 49201

JOHN C PARKER MD
610 N WEST AVENUE
JACKSON MICHIGAN 49202

ANDREW K PAYNE MD
FOOTE MEMORIAL HOSP
JACKSON MICH 49201

GEO H PHILLIPS MD
JACKSON CO T B SANAT
JACKSON MICH 49202

FRANK F PRAY MD L
6533 WOODARD LAKE RD
FENWICK MI 48834

BERNARD Z REIZNER MD
611 HILL RD
MARSHALL MI 49068

JOHN W RICE MD
421 MC NEAL ST
JACKSON MICH 49203

PHILLIP O RICHARDS MD
214 N WEST AVE
JACKSON MI 49201

RICHARD G RIES MD
720 W FRANKLIN ST
JACKSON MICH 49201

PHILIP A RILEY MD L
500 S JACKSON ST
JACKSON MI 49203

PHILIP A RILEY JR M D
500 S JACKSON ST
JACKSON MICH 49203

IGNACIO RUA MD
1810 W HIGH
JACKSON MICHIGAN 49203

PARVIZ SAMII MD
508 HARRIS BLDG
JACKSON MI 49201

LELAND E SARGENT MD
FOOTE MEMORIAL HOSP
JACKSON MICH 49201

WM A SAUTTER MD
HORTON MI 49246

THEOPHILE E SCHMIDT MD L
180 W MICHIGAN AVE
JACKSON MI 49201

R H SCHNEIDER MD
724 W FRANKLIN
JACKSON MICH 49201

FRANK J SCHRADER MD
502 LANSING AVE
JACKSON MI 49201

LELAND D SHAEFFER MD
1615 CARLTON BLVD
JACKSON MICH 49203

HENRY W SILL MD
724 W MICHIGAN AVE
JACKSON MICHIGAN 49201

ALFRED M SIRHAL MD
BROOKLYN MI 49230

DEAN W SMITH MD
569 WILDWOOD
JACKSON MI 49201

WM R STACKABLE MD
3216 BLACKBERRY
MT VERNON ILL 62864

JOHN F STAGEMAN MD
609 HARRIS BLDG
JACKSON MI 49201

LEWIS L STEWART JR MD
1919 KIBBY RD
JACKSON MICHIGAN 49203

CARL A STOLBERG MD
724 W FRANKLIN
JACKSON MICH 49201

ETHON L STONE MD
721 SEVENTEENTH ST
JACKSON MICH 49203

SAMUEL SUGAR MD
762 W MICHIGAN
JACKSON MI 49201

CECIL E TATE MD
2400 W MICHIGAN AVE
JACKSON MICH 49202

ROSS V TAYLOR MD
517 WILDWOOD AVE
JACKSON MI 49201

LEONARD F THALNER MD L
609 W MICHIGAN AVE
JACKSON MI 49201

EARL A THAYER MD L
120 W MICHIGAN AVE
JACKSON MI 49201

T B THOMPSON MD
1310 GREENWOOD
JACKSON MI 49203

JAMES W TOWNSEND MD L
108 HAGUE AVE
VANDERCOOK LAKE
JACKSON MI 49203

FRANK VAN SCHOICK MD
2100 4TH ST
JACKSON MI 49203

R M VANSCHOICK MD
1731 THORNWOOD RD
JACKSON MICHIGAN 49203

F I VAN WAGNEN JR MD
434 WILDWOOD AVE
JACKSON MICH 49201

EDWARD E VIVIRSKI MD
603 S ELM AVE
JACKSON MICH 49203

RICHARD K WAESCHLE MD
HENRY FORD HOSPITAL
DETROIT MI 48202

EDWARD R WEDDON MD
R F D 2
STOCKBRIDGE MICH 49285

JOHN W WHOLIHAN MD
604 W MICHIGAN AVE
JACKSON MICH 49201

WOODWARD A WICKHAM MD
2029 FOURTH
JACKSON MICHIGAN 49203

WARREN S WILLE MD
5325 BROWN LAKE RD
JACKSON MICHIGAN 49203

THOMAS S WITTMAN DDS A
761 W MICHIGAN AVE
JACKSON MI 49201

ANDRE Y ZARZOUR MD
707 N WISNER
JACKSON MI 49202

KALAMAZOO

HUGO A AACH MD R
425 SORRENTO CT
PUNTA GORDA FL 33950

EDWARD P AJEMIAN MD
208 BRONSON MED CTR
KALAMAZOO MICH 49006

C A ALEXANDER MD
118 W NORTH ST
KALAMAZOO MICH 49007

H DALE ALKEMA MD
1631 GULL RD
KALAMAZOO MI 49001

JAMES A AMLICKE MD
1219 SO PARK ST
KALAMAZOO MI 49001

SHERMAN E ANDREWS MD
935 JOHN ST
KALAMAZOO MI 49001

THOMAS E ANDREWS MD
1634 GULL RD #207
KALAMAZOO MI 49001

HOWARD H ANGELL MD A
UPJOHN COMPANY
KALAMAZOO MI 49006

WALTER M ANGLIN MD A
7211 LANTOLLARY RD
KALAMAZOO MI 49004

BEN A APPEL MD
252 E LOVELL ST
KALAMAZOO MICH 49006

WILLIAM APPEL MD
252 E LOVELL ST
KALAMAZOO MI 49006

LLOYD E APPELL MD
126 N KALAMAZOO AVE
VICKSBURG MICH 49097

ROBT J ARMSTRONG MD R
3336 LAKESHORE DR
SAULT STE MARIE MI 49783

ENVER AYDOGAN MD
1141 S ROSE ST
KALAMAZOO MICHIGAN 49001

FREDK W BALD 111 MD
BRONSON MEDICAL CTR
KALAMAZOO MI 49006

LAWRENCE R BANNER MD
KALAMAZOO STATE HOSP
KALAMAZOO MI 49003

ROBERT P BARCALA MD
1631 GULL RD #210
KALAMAZOO MI 49001

WINONA M BARROWS MD
1500 BLAKESLEE ST
SW MICH TB CONTROL CTR
KALAMAZOO MI 49007

MANLEY L BARRY MD
10292 DOUGLAS AVE
PLAINWELL MICH 49080

WILLIAM T BATEMAN MD
914 S BURDICK
KALAMAZOO MI 49001

KEITH F BENNETT MD
252 E LOVELL ST
KALAMAZOO MICH 49006

H CURTIS BENSON MD
217 BRONSON MED CTR
KALAMAZOO MI 49006

THOMAS R BERGLUND MD
325 E CENTRE ST
PORTAGE MI 49081

V A BERGLUND MD
325 E CENTRE ST
PORTAGE MI 49081

IVOR BERRY JR MD
516 WHITES RD
KALAMAZOO MICHIGAN 49001

ELDEAN G BETZ MD
1711 MERRILL
KALAMAZOO MI 49001

WM G BIRCH MD
252 E LOVELL ST
KALAMAZOO MI 49006

WILBUR R BIRK MD
211 BRONSON MED CTR
KALAMAZOO MI 49006

HARVEY C BODMER MD
403 W KALAMAZOO AVE
KALAMAZOO MICH 49006

DAVID E BOSWELL MD
325 E CENTRE ST
PORTAGE MI 49081

RICHARD J BOWER MD
325 E CENTRE ST
PORTAGE MI 49081

JAMES C BRENEMAN MD
25 PEARL ST
GALESBURG MI 49053

CARTER D BROOKS MD A
UPJOHN COMPANY
KALAMAZOO MI 49001

ARTHUR L BROWN 11 MD
101 BRONSON MED CTR
KALAMAZOO MI 49006

ROBERT W BROWNLEE MD
1631 GULL ROAD
KALAMAZOO MI 49001

PETER P BRUE MD R
1009 CAMBRIDGE DR
KALAMAZOO MICH 49001

HARRY W BURDICK MD
1219 S PARK ST
KALAMAZOO MICHIGAN 49001

ROBT B BURRELL MD
1711 MERRILL ST
KALAMAZOO MICH 49001

WM J BUTLER MD
1631 GULL RD
KALAMAZOO MICHIGAN 49001

C GLEN CALLANDER MD
252 E LOVELL ST
KALAMAZOO MICH 49006

E R CARTER MD
1324 S PARK ST
KALAMAZOO MICHIGAN 49001

GEO F CARTLAND PHD A
1704 DOVER RD
KALAMAZOO MI 49001

RUSSELL M CASHEN MD
252 E LOVELL ST
KALAMAZOO MICH 49006

RONALD S CHIPPS MD
1017 ELDRIDGE DR
KALAMAZOO MI 49007

DALE D J CHODOS MD A
UPJOHN COMPANY
KALAMAZOO MI 49001

CLARENCE P CHREST MD
458 W SOUTH ST
KALAMAZOO MICH 49006

DANIEL K CHRISTIAN MD
252 E LOVELL ST
KALAMAZOO MICHIGAN 49006

F L CLEMENT MD
502 BRONSON MED CEN
KALAMAZOO MICHIGAN 49006

MAYNARD M CONRAD MD
252 E LOVELL ST
KALAMAZOO MICH 49006

PAUL F COOPER MD
252 E LOVELL ST
KALAMAZOO MICHIGAN 49006

EVAN L COPELAND MD
KALAMAZOO STATE HOSP
BOX A
KALAMAZOO MI 49001

F L CORNISH III MD
1631 GULL RD
KALAMAZOO MICHIGAN 49001

N WARN COURTNEY MD
458 W SOUTH ST
KALAMAZOO MI 49006

FRANKLIN COX MD
BORGESS HOSPITAL
KALAMAZOO MI 49001

KENNETH R CRAWLEY MD A
UPJOHN COMPANY
KALAMAZOO MI 49006

RAY O CREAGER MD
1218 BRONSON CIRCLE
KALAMAZOO MICH 49001

FRANCIS C CRETSINGER
935 JOHN ST
KALAMAZOO MI 49001

R E CROASDALE MD
252 E LOVELL ST
KALAMAZOO MICHIGAN 49006

CYRIL J CURRAN MD
BORGESS HOSPITAL
KALAMAZOO MI 49001

JAMES P CURRAN MD
KALAMAZOO STATE HOSP
KALAMAZOO MI 49001

RICHARD K CURRIER MD
325 E CENTRE ST
PORTAGE MI 49081

DORIS E DAHLSTROM MD
ROUTE 1
HICKORY CORNERS MI 49060

WM A DECKER MD
1217 OAKLAND
KALAMAZOO MICH 49001

RAYMOND M DEHAAN MD A
UPJOHN COMPANY
KALAMAZOO MI 49006

HAROLD E DE PREE MD
252 E LOVELL ST
KALAMAZOO MICH 49006

JOHN M DE VRIES MD
516 WHITES RD
KALAMAZOO MI 49001

NORMAN L DE WITT MD R
5131 M43 BOX 77A
HICKORY CORNERS MI 49060

LEO A DICK MD
1700 GULL RD
KALAMAZOO MICHIGAN 49001

KENNETH R DORNER MD
220 BRONSON MED CENTER
KALAMAZOO MI 49006

GLEN H DOUGLASS MD
1324 S PARK
KALAMAZOO MI 49001

BENNARD J DOWD MD
1700 GULL RD
KALAMAZOO MICHIGAN 49001

FREDK M DOYLE MD R
3320 BRONSON BLVD
KALAMAZOO MI 49001

ROBERT FABI MD
1631 GULL RD
KALAMAZOO MI 49001

AUGUST F FATH MD
1631 GULL ROAD
KALAMAZOO MICHIGAN 49001

ROBT K FERGUSON MD
1141 S ROSE ST
KALAMAZOO MICH 49001

F J FITZSIMMONS MD
GMC DIV 5200 E CORK ST
KALAMAZOO MICHIGAN 49002

ROMAN FLUNT M D
BOX A KALAMAZOO ST HOS
KALAMAZOO MI 49003

JOHN V FOPEANO MD
1711 MERRILL ST
KALAMAZOO MICH 49001

ROBERT J FOSMOE MD
458 W SOUTH ST
KALAMAZOO MICHIGAN 49006

J WILLIAM FRY MD
1821 WHITES RD
KALAMAZOO MICHIGAN 49001

PAUL M FULLER MD R
1700 GULL RD
KALAMAZOO MICH 49001

ALMARIO M GARAZA MD
1521 GULL RD
KALAMAZOO MI 49001

CARL A GARDNER MD
1141 S ROSE ST
KALAMAZOO MICH 49001

JAMES A GARDNER MD
458 W SOUTH ST
KALAMAZOO MI 49006

ARTHUR F GEIS MD
424 JENNISON ST
KALAMAZOO MI 49007

RICHARD M GERSTNER MD
212 BRONSON MED CTR
KALAMAZOO MICHIGAN 49006

RICHARD E GIBSON MD
SCHOOLCRAFT MI 49087

WM S GLADSTONE MD
458 W SOUTH ST
KALAMAZOO MICH 49006

DANL F GLASER MD
463 ACADEMY ST
KALAMAZOO MICH 49006

GLENN E GOOD MD
2901 S WESTNEDGE
KALAMAZOO MI 49001

LOLITA G GOODHUE MD L
905 A MENLO AVE
MENLO PARK CALIF 94025

SADANANDA C M GOUD MD
325 E CENTRE AVE
PORTAGE MI 49081

ROBERT S GOVE MD
1631 GULL RD
KALAMAZOO MICH 49001

WALTER GRABOWSKI MD
315 BRONSON MED CTR
KALAMAZOO MI 49006

MICHAEL GRAF MD
1634 GULL ROAD
KALAMAZOO MI 49001

ROBT H GREKIN MD
417 FOREST ST
KALAMAZOO MI 49001

NORMAN GREMEL MD
458 W SOUTH ST
KALAMAZOO MICH 49006

KARE GUNDERSEN MD A
UPJOHN COMPANY
KALAMAZOO MI 49001

C A HADDOCK JR MD
1711 MERRILL ST
KALAMAZOO MICH 49001

JAMES A HAGANS MD
UPJOHN COMPANY
KALAMAZOO MI 49006

HAROLD F HAILMAN MD
PO BOX 430
YONKERS NY 10702

JOHN M HAMMER MD
100 MAPLE ST
PARCHMENT MICH 49004

CURTIS M HANSON MD
1324 S PARK ST #1
KALAMAZOO MI 49001

J DONALD HARE MD
516 WHITES ROAD
KALAMAZOO MI 49001

FRANK G HARRELL MD
1602 GULL RD
KALAMAZOO MICHIGAN 49001

WM D HARRELSON MD
1324 S PARK
KALAMAZOO MICHIGAN 49001

RUSSELL A HAYNER MD
4015 PORTAGE
KALAMAZOO MICH 49001

H SIDNEY HEERSMA MD
517 PLEASANT
KALAMAZOO MICH 49001

ROBT W HEINLE MD
MED DIV UPJOHN CO
KALAMAZOO MICH 49006

J W HENDRIX MD
515 FINEVIEW
KALAMAZOO MI 49007

DONALD E HERENDEEN MD
1219 S PARK
KALAMAZOO MI 49001

DAVID K HICKOK MD
517 PLEASANT AVE
KALAMAZOO MI 49001

ROSCOE C HILDRETH MD
458 W SOUTH ST
KALAMAZOO MI 49006

ROBERT V HILL
WESTERN MICH UNIV
HEALTH CENTER
KALAMAZOO MI 49001

RALPH M HODGES MD
1631 GULL RD 209
KALAMAZOO MI 49001

ALBERT B HODGMAN MD
612 DOUGLAS AVE
KALAMAZOO MICHIGAN 49007

RICHARD W HODGMAN MD
502 BRONSON MED CTR
KALAMAZOO MICHIGAN 49006

GEORGE J HOEKSTRA MD
100 MAPLE ST
PARCHMENT MICHIGAN 49004

WILLARD H HOWARD MD
1536 GULL RD
KALAMAZOO MICHIGAN 49001

EDWIN M HUBBARD MD
252 E LOVELL ST
KALAMAZOO MICHIGAN 49006

WM N HUBBARD JR MD
THE UPJOHN CO
KALAMAZOO MI 49001

A THOMAS HUDSON MD
1631 GULL RD #201
KALAMAZOO MI 49001

ROBT H HUME MD
1711 MERRILL ST
KALAMAZOO MICHIGAN 49001

JACK HUNT MD
1631 GULL RD
KALAMAZOO MICHIGAN 49001

WM C HUYSER MD L
427 S BURDICK ST
KALAMAZOO MI 49006

WM D IRWIN MD L
2333 SHEFFIELD DR
KALAMAZOO MICH 49001

JAMES P JACOBS MD
611 WHITCOMB ST
KALAMAZOO MI 49001

ROBERT A JANKE MD
1821 WHITES DR W
KALAMAZOO MI 49001

ROBT M JENNINGS MD
BOX A KALA STATE HOSP
KALAMAZOO MI 49003

FENIMORE T JOHNSON MD A
MED DIV UPJOHN CO
KALAMAZOO MI 49006

HAROLD C A JOHNSON MD
211 BRONSON MED CTR
KALAMAZOO MI 49006

WM H JOHNSON MD
HEALTH CTR WMU
KALAMAZOO MI 49001

FRANK O KADRNKA MD A
UPJOHN COMPANY
KALAMAZOO MI 49006

ARMAND KAPIK MD
1521 GULL RD
KALAMAZOO MI 49001

JOHN KAVANAUGH MD
1634 GULL ROAD
KALAMAZOO MI 49001

T E KAVANAUGH MD
1634 GULL ROAD
KALAMAZOO MI 49001

WM R KAVANAUGH MD
612 DOUGLAS AVE
KALAMAZOO MICH 49007

PLINY M KEEP MD
1521 GULL RD
KALAMAZOO MICHIGAN 49001

ROBERT C KETTUNEN MD
252 E LOVELL ST
KALAMAZOO MICHIGAN 49006

JOHN L KIHM MD
1219 S PARK ST
KALAMAZOO MICHIGAN 49001

JAMES B KILWAY MD
BRONSON MEDICAL CTR
KALAMAZOO MI 49006

JOSEPH E KINCAID MD
1634 GULL RD
KALAMAZOO MI 49001

WM J KLERK MD R
2421 WAITE
KALAMAZOO MICH 49001

PAUL A KOESTNER MD
1303 PORTAGE ST
KALAMAZOO MICH 49001

EVAN P KOKALES MD
WESTERN MICH UNIV
KALAMAZOO MI 49003

JOHN S KOSTIN MD
9880 E MICHIGAN AVE
GALESBURG MI 49053

WILLIAM J KUBE MD
1219 S PARK ST
KALAMAZOO MI 49001

JAMES O LAWRENCE MD A
924 SUNSET LANE
KALAMAZOO MI 49001

JAMES B LAWSON MD A
709 REGENCY SQ APT 301
KALAMAZOO MI 49001

RICHARD A LEMMER MD
252 E LOVELL ST
KALAMAZOO MICH 49006

JOHN D LITTIG MD
7171 PORTAGE AVE
KALAMAZOO MICH 49002

P M LITTLEJOHN MD
5111 WOODMONT DR
KALAMAZOO MICHIGAN 49001

W KAYE LOCKLIN MD
1141 S ROSE
KALAMAZOO MICH 49001

JAMES M LOUISELL MD
611 WHITCOMB ST
KALAMAZOO MICHIGAN 49001

W CARTER LOWE MD
252 E LOVELL ST
KALAMAZOO MI 49006

JAMES W LOYND II MD
1141 S ROSE ST
KALAMAZOO MICH 49001

KONRADS V LUBAVS MD
420 JOHN ST
KALAMAZOO MICHIGAN 49006

M A MAC DONALD MD
252 E LOVELL ST
KALAMAZOO MICH 49006

HAROLD A MACHIN MD
420 JOHN ST
KALAMAZOO MICHIGAN 49006

JAMES E MAC VICAR MD
252 E LOVELL ST
KALAMAZOO MICHIGAN 49006

JAMES G MALONE MD
420 JOHN ST
KALAMAZOO MICH 49006

FREDK J MARGOLIS MD
2901 S WESTNEDGE
KALAMAZOO MICH 49001

DON MARSHALL MD
301 BRONSON MED CTR
KALAMAZOO MICH 49006

WM P MARSHALL MD
211 BRONSON MDCL CTR
KALAMAZOO MI 49006

WM B MARTIN MD
UPJOHN CO BLDG 24-2
KALAMAZOO MI 49001

DONALD G MAY MD
1634 GULL RD
KALAMAZOO MI 49001

JAMES H MCCARTHY MD
100 MAPLE ST
PARCHMENT MICHIGAN 49004

JOS S MC CARTHY MD L
2236 TIPPERARY RD
KALAMAZOO MI 49001

JOHN A MCCOLL MD
1634 GULL RD
KALAMAZOO MICHIGAN 49001

RICHARD R MCCONNELL MD
458 W SOUTH ST
KALAMAZOO MICHIGAN 49006

WM E MCNALLY MD
325 E CENTRE ST
PORTAGE MI 49081

RICHARD MELLIS MD
611 WHITCOMB ST
KALAMAZOO MI 49001

JAMES W MELLUISH MD
350 S BURDICK
KALAMAZOO MI 49006

RICHARD C MERRIMAN MD
516 WHITES RD
KALAMAZOO MICHIGAN 49001

BRUCE W MESARA MD
239 WESTVIEW
KALAMAZOO MI 49007

CARL R MOE MD
1324 S PARK ST
KALAMAZOO MICH 49001

RUSSELL E MOHNEY JR MD
1631 GULL RD
KALAMAZOO MI 49001

BASIL A MOLONY MD M
C/O ST CHARLES CLINIC
ST CHARLES MO 63301

ROGER M MORRELL MD A
4016 NICHOLS RD
KALAMAZOO MI 49001

JOHN B MORRILL MD
1634 GULL RD
KALAMAZOO MI 49001

ROY A MORTER MD L
2421 SHEFFIELD
KALAMAZOO MI 49001

ADRIAN J NEERKEN MD
404 BRONSON MED CTR
KALAMAZOO MICH 49001

ROBT M NICHOLSON MD
517 PLEASANT AVE
KALAMAZOO MICH 49001

ANNA NOVAK MD
1706 HELEN ST
KALAMAZOO MI 49002

ERVIN NOVAK MD A
UPJOHN COMPANY
KALAMAZOO MI 49001

GEORGE H ONG MD
1631 GULL RD
KALAMAZOO MI 49001

CHAS B OVERBEY JR MD
BOX A KAZOO ST HOSP
KALAMAZOO MI 49003

SOO H PAI MD
BORGESS HOSPITAL
1521 GULL RD

KALAMAZOO MI 49001

MARTIN PATMOS MD
252 E LOVELL ST
KALAMAZOO MICH 49006

CHAS O PEAKE III MD
252 E LOVELL ST
KALAMAZOO MICH 49006

EDWIN O PEARSON MD
458 W SOUTH ST
KALAMAZOO MI 49006

J W PEELEN MD
516 WHITES RD
KALAMAZOO MI 49001

MATTHEW PEELEN MD
252 E LOVELL ST
KALAMAZOO MI 49006

CLIFTON W PERRY MD R
1425 BALBOA
KALAMAZOO MI 49002

RAYMOND A PINKHAM MD
611 WHITCOMB ST
KALAMAZOO MICHIGAN 49001

JOHN D POOL MD
MASS GENERAL HOSP
BOSTON MASS 02114

GERALD W POWLEY MD
517 PLEASANT
KALAMAZOO MICHIGAN 49001

HAROLD M PRITCHARD MD
HEALTH CENTER WMU
KALAMAZOO MI 49003

RICHARD A PROOS MD
WESTERN MICH UNIV
KALAMAZOO MICHIGAN 49003

ALTON E PULLON MD L
1223 S PARK ST
KALAMAZOO MICH 49001

LEO B RASMUSSEN MD
152 N MAIN ST
VICKSBURG MICHIGAN 49097

HAROLD R REAMES MD
2901 S WESTNEDGE
KALAMAZOO MICHIGAN 49001

THOMAS J REIGEL JR MD
2019 RAMBLING RD
KALAMAZOO MICHIGAN 49001

GERALD H RIGTERINK MD
433 SOUTH ROSE ST
KALAMAZOO MICH 49006

MILLARD S ROBERTS MD
1631 GULL RD
KALAMAZOO MICHIGAN 49001

WALTER A ROBISON MD
1631 GULL ROAD
KALAMAZOO MI 49001

DONALD C ROCKWELL MD L
1227 JEFFERSON
KALAMAZOO MI 49007

HUGO K ROESLER MD
1141 S ROSE ST
KALAMAZOO MICHIGAN 49001

RODNEY J ROGERS M D
126 N KALAMAZOO
VICKSBURG MICH 49097

AUGUST R ROTY JR MD
252 E LOVELL
KALAMAZOO MI 49006

GARY RUOFF MD
1416 W MILHAM RD
KALAMAZOO MI 49002

ALLAN H RUSSCHER MD
252 E LOVELL
KALAMAZOO MICHIGAN 49006

FREDK C RYAN MD
KALAMAZOO STATE HOSP
KALAMAZOO MI 49003

WM A RYE MD
UPJOHN COMPANY
KALAMAZOO MICHIGAN 49006

EDWARD D SAGE MD L
1028 PORTAGE ST
KALAMAZOO MICH 49001

SOLOMON K SAMUELS MD
1631 GULL RD #205
KALAMAZOO MI 49001

F W SASSAMAN MD
301 BRONSON MED CTR
KALAMAZOO MI 49006

DONALD S SCHAEFER MD
1324 S PARK
KALAMAZOO MI 49001

FLORA E SCHERER MD A
3628 BRONSON BLVD
KALAMAZOO MI 49001

JAMES W SCHOLL MD
1634 GULL RD
KALAMAZOO MICHIGAN 49001

ROGER A SCHOLTEN MD
252 E LOWELL ST
KALAMAZOO MICH 49006

R S SCHRIEBER PHD A
UPJOHN COMPANY
KALAMAZOO MI 49006

CLARENCE T M SCHRIER
KALAMAZOO STATE HOSP
KALAMAZOO MICH 49001

ALMON L SCHUT MD
401 BRONSON MED CENTER
KALAMAZOO MICHIGAN 49006

PAUL C SCHWALLIE MD A
483 SUNRISE CIRCLE
KALAMAZOO MI 49001

GARTH SHULTZ MD
217 BRONSON MED CTR
KALAMAZOO MI 49006

WM S SKELLENGER MD
2019 RAMBLING RD
KALAMAZOO MICHIGAN 49001

KAREL R SLATMYER JR MD
211 BRONSON MDCL CTR
KALAMAZOO MI 49006

ROGER J SMITH MD
3010 BROOK DRIVE
PARCHMENT MI 49004

JOSEPH T SOBOTA MD
UPJOHN CO
KALAMAZOO MI 49006

MORRIS B SOFEN MD
503 KALAMAZOO BLDG
KALAMAZOO MICH 49006

R R SPRINGGATE MD
1631 GULL RD
KALAMAZOO MICHIGAN 49001

FRANK M STEELE MD
1521 GULL RD
KALAMAZOO MI 49001

R B STEWART MD
211 BRONSON MDCL CTR
KALAMAZOO MI 49006

WM C STEWART JR MD
2019 RAMBLING RD
KALAMAZOO MICH 49001

L D STIEGLITZ MD
218 W INKSTER
KALAMAZOO MI 49001

ANTHONY F STILLER MD R
1235 N HILLANDALE DR
KALAMAZOO MI 49001

HOMER H STRYKER MD L
420 ALCOTT
KALAMAZOO MI 49001

SAMUEL S STUBBS MD A
1342 LAMA RD
KALAMAZOO MI 49001

RAYMOND O SWANN MD
611 WHITCOMB ST
KALAMAZOO MICH 49001

EDMUND FALANDA MD
3125 W MAIN
KALAMAZOO MICH 49007

WILLIAM G TUCKER MD
1631 GULL ROAD
KALAMAZOO MI 49001

E GIFFORD UPJOHN MD R
UPJOHN COMPANY
KALAMAZOO MICH 49006

HAROLD UPJOHN MD
UPJOHN COMPANY
KALAMAZOO MICH 49006

GERALD VAN ARENDONK MD
203 UPJOHN DR
KALAMAZOO MICH 49001

PAUL VAN DEN BRINK MD
208 BRONSON MED CENTER
KALAMAZOO MI 49006

K M VANDER VELDE MD
252 E LOVELL ST
KALAMAZOO MI 49006

JAMES J VAN HARE MD
3506 LOVERS LANE
KALAMAZOO MI 49001

ALAN B VARLEY MD
2146 TREEHAVEN DR
KALAMAZOO MICHIGAN 49001

THOMAS J VECCHIO MD A
1090 CADET LANE
KALAMAZOO MI 49001

WILLIAM J VENEMA MD
517 PLEASANT AVE
KALAMAZOO MI 49001

MARTIN D VERHAGE MD
1748 GREENLAWN
KALAMAZOO MI 49007

JOHN C VOLDERAUER MD R
905 EDGEMOOR AVE
KALAMAZOO MICH 49001

PAUL WANG MD
417 FOREST ST
KALAMAZOO MI 49001

ROBT D WARNKE MD
1634 GULL ROAD
KALAMAZOO MI 49001

PRESTON S WEADON MD
252 E LOVELL ST
KALAMAZOO MICH 49006

JOSEPH P WEBB MD A
3351 BURBANK DRIVE
ANN ARBOR MI 48105

FRED L WEDEKING MD
HLTH CENTER WMU
KALAMAZOO MI 49001

IRVING R WEISS MD
9880 E MICHIGAN
GALESBURG MI 49053

EDWIN M WILLIAMSON MD
252 E LOVELL ST
KALAMAZOO MICH 49006

DOYLE E WILSON MD
252 E LOVALL ST
KALAMAZOO MICHIGAN 49006

WILLIAM H WOODHAMS MD
3125 W MAIN
KALAMAZOO MI 49007

JACK F WU M D
810 E CENTER AVE
KALAMAZOO MICH 49001

WILLIAM G YANG MD
3125 W MAIN ST
KALAMAZOO MICHIGAN 49007

EDWARD L YAPLE MD
1141 S ROSE ST
KALAMAZOO MICHIGAN 49001

CYRIL A YOUNGS MD L
416 SO BURDICK ST
KALAMAZOO MI 49006

JOHN L ZETTELMAIER MD
1631 GULL RD
KALAMAZOO MI 49001

MARGARET H ZOLEN MD
628 S PARK ST
KALAMAZOO MICH 49007

KENT

ARSENIO B ABLAO MD
1330 BRADFORD ST NE
GRAND RAPIDS MI 49503

RAM ADVANI MD
1840 WEALTHY ST SE
GRAND RAPIDS MI 49506

GEO T AITKEN MD
50 COLLEGE AVE SE
GRAND RAPIDS MI 49503

G DONALD ALBERS MD
203 PARIS AVE SE
GRAND RAPIDS MI 49503

CHAS W ALDRIDGE JR MD
153 LAFAYETTE SE
GRAND RAPIDS MI 49503

FELIX S ALFENITO JR MD
515 LAKESIDE DR SE
GRAND RAPIDS MICH 49506

GEORGE D ALGER M D
2410 GAYNOR AVE NW
GRAND RAPIDS MI 49504

RALPH V ALLEN MD L
6020 11 MILE RD
ROCKFORD MI 49341

JERRY W ANDERSON MD
245 STATE ST SE
GRAND RAPIDS MICH 49502

HARVEY M ANDRE MD
500 CHERRY ST S E
GRAND RAPIDS MI 49503

V W ARMBRUSTMACHER MAJ A
USAF-MC-USAF HOSP
BOX 219

APO NEW YORK N Y 09220

ROBERT N ASHBY MD
201 LAFAYETTE AVE SE
GRAND RAPIDS MI 49503

NOYES L AVERY JR MD
515 LAKESIDE DR SE
GRAND RAPIDS MICH 49506

ROBT J BAKER MD
6850 DIVISION AVE S
GRAND RAPIDS MI 49508

DURWARD J BAKKER MD
1033 FULTON ST W
GRAND RAPIDS MI 49504

GORDON W BALYEAT MD
1810 WEALTHY ST S E
GRAND RAPIDS MI 49506

GERALD F BAROFSKY MD
808 ALGER ST S E
GRAND RAPIDS MI 49507

GORDON L BARTEK M D
833 LAKE DR SE
GRAND RAPIDS MI 49502

CLAIR E BASINGER M D
1810 WEALTHY ST S E
GRAND RAPIDS MICH 49506

FRED A BAUGHMAN JR MD
1810 WEALTHY ST SE
GRAND RAPIDS MICH 49506

WM D BAXTER MD A
1010 S MICHIGAN
HASTINGS MI 49058

MAJ JERIAL A BEARD MC A
378-36-6582
12TH EVAC HOSP APO

SAN FRANCISCO CA 96353

JAMES H BEATON MD
153 LAFAYETTE SE
GRAND RAPIDS MI 49503

DAVID S BEEBE MD
153 LAFAYETTE AVE SE
GRAND RAPIDS MI 49503

CARL B BEEMAN MD
515 LAKESIDE DR SE
GRAND RAPIDS MI 49506

W CLARENCE BEETS MD
124 FULTON ST E
GRAND RAPIDS MI 49502

CHAS M BELL MD
50 COLLEGE AVE SE
GRAND RAPIDS MI 49503

GEORGE J BENISEK MD
305 DOGWOOD NE
ADA MICHIGAN 49301

HOWARD G BENJAMIN MD
72 SHELDON AVE S E
GRAND RAPIDS MI 49502

ROLAND R BENSON MD
201 LAFAYETTE SE
GRAND RAPIDS MI 49503

STUART BERGSMA MD
6850 DIVISION S
GRAND RAPIDS MI 49508

MARENUS J BEUKEMA MD
6850 S DIVISION AVE
GRAND RAPIDS MI 49508

C REXFORD BIGNALL MD
245 STATE STREET SE
GRAND RAPIDS MI 49503

BENJ H BIRKBECK MD
26 SHELDON AVE S E
GRAND RAPIDS MI 49502

RALPH BLOCKSMA MD
245 STATE ST SE
GRAND RAPIDS MI 49503

RICHARD C BOELKINS MD
1011 E FULTON ST
GRAND RAPIDS MI 49503

WALTER J BOERMAN MD
2410 GAYNOR AVE NW
GRAND RAPIDS MI 49504

DONALD BOERSMA MD
26 SHELDON AVE SE
GRAND RAPIDS MICH 49502

JOHN T BOET MD
750 FULLER AVE NE
GRAND RAPIDS MICH 49503

MARVIN BONZELAAR MD
2740 EASTERN AVE SE
GRAND RAPIDS MICH 49507

CRAIG E BOOHER MD
1810 WEALTHY ST S E
GRAND RAPIDS MI 49506

JAN K BOSCH MD
221 MICHIGAN ST NE
GRAND RAPIDS MI 49503

A J BOTTING MD
2360 84TH ST SW
BYRON CENTER MI 49315

HAROLD E BOWMAN MD
201 LAFAYETTE SE
GRAND RAPIDS MI 49503

DAVID C BOYCE MD
515 LAKESIDE DR SE
GRAND RAPIDS MI 49506

F C BRACE MD
1498 LAKE DR S E
GRAND RAPIDS MI 49506

HARVEY J BRATT MD
833 LAKE DR SE
GRAND RAPIDS MI 49506

GEO E BRAUNSCHNEIDER
2410 GAYNOR AVE NW
GRAND RAPIDS MI 49504

J RUSSELL BRINK MD
50 COLLEGE AVE SE
GRAND RAPIDS MI 49503

ANNA H BROECKER MD
1840 WEALTHY ST SE
GRAND RAPIDS MI 49506

FRANK L BULL MD L
65 SO STATE ST
SPARTA MI 49345

JOHN B BURHANS MD
515 LAKESIDE DR SE
GRAND RAPIDS MICH 49506

F M BURROUGHS JR MD A
3307 OTTAWA
GRANDVILLE MI 49418

M C BURTON JR MD
315 RICHARD TERRACE SE
GRAND RAPIDS MI 49506

ROBERT D BURTON MD
515 LAKESIDE DR SE
GRAND RAPIDS MI 49506

WM J BUTLER MD A
6552 SHEPHERD HILLS
TUCSON AZ 85710

MARY L BYRD MD
700 KENT HILLS RD N E
GRAND RAPIDS MI 49505

CHARLES L CALLAWAY MD
2505 ARDMORE ST SE
GRAND RAPIDS MI 49506

MANUEL M CAMPOS MD
72 SHELDON AVE SE
GRAND RAPIDS MI 49502

SAMUEL C CAPPS M D
100 MICHIGAN ST N E
GRAND RAPIDS MICH 49503

L C CARPENTER MD
50 COLLEGE AVE SE
GRAND RAPIDS MI 49503

ANNE C CARTER MD A
201 LAFAYETTE AVE SE
GRAND RAPIDS MI 49503

HOWARD S CAUKIN MD
500 CHERRY ST S E
GRAND RAPIDS MI 49503

WM CAYCE MD
245 STATE STREET SE
GRAND RAPIDS MI 49502

JOHN P CHAMPION MD
2060 ROBINSON RD SE
GRAND RAPIDS MI 49506

DONALD CHANDLER MD
60 MONROE AVE NW
GRAND RAPIDS MI 49502

ROBERT J CHASE M D
833 LAKE DRIVE SE
GRAND RAPIDS MICH 49506

J ROGER CHATTERTON MD A
2/14 ARTY APO
NEW YORK N Y 09093

MEY EN CHEN MD A
518 BELVEDERE DR SE
GRAND RAPIDS MI 49506

ERWIN G CLAHASSEY MD
50 COLLEGE AVE SE
GRAND RAPIDS MI 49503

JAMES F CLARK MD
201 LAFAYETTE AVE SE
GRAND RAPIDS MI 49503

CARROLL K CLAWSON MD
445 CHERRY ST S E
GRAND RAPIDS MICH 49503

ROBT W CLAYTOR MD L
1424 MADISON AVE S E
GRAND RAPIDS MI 49507

R PAUL CLODFELDER MD
937 W FULTON ST
GRAND RAPIDS MI 49504

HAROLD D CRANE MD L
26 SHELDON AVE S E
GRAND RAPIDS MI 49502

JOHN A CREMER MD A
JEAN ORR MEM HOSP
DEMBI DOLLO ETHIOPIA

RICHARD K CRISSMAN MD
2747 CLYDE PARK SW
GRAND RAPIDS MICH 49509

PAUL M DASSEL MD
833 LAKE DR SE
GRAND RAPIDS MI 49506

DAVID B DAVIS MD R
266 PETTIS AVE NE
ADA MI 49301

THOMAS B DAVIS MD
1810 WEALTHY ST SE
GRAND RAPIDS MI 49506

WALTER D DAWSON MD
26 SHELDON AVE SE
GRAND RAPIDS MI 49502

ALFRED DEAN MD L

SAGOLA MI 49881

ARTHUR F DE BOER MD
2435 EASTERN AVE SE
GRAND RAPIDS MICH 49507

CLARENCE J DE BOER MD
3181 PRAIRIE S W
GRANDVILLE MICH 49418

GUY W DE BOER MD
26 SHELDON AVE S E
GRAND RAPIDS MI 49502

ROBERT P DE CLARK MD
1008 S LINCOLN RD
SIOUX FALLS S D 57105

BUD R DEJONGE MD
909 FULTON ST E
GRAND RAPIDS MI 49503

RICHARD M DELNAY MD
1908 MENOMINEE DR SE
GRAND RAPIDS MI 49506

J G DEN HARTOG MD A
AM EVANGELICAL MISSION
GHINDA ERITREA

ETHIOPIA

ISLA G DE PREE MD R

DRUMMOND ISLAND MI 49726

THEODORE R DEUR MD
DEUR CLINIC
GRANT MI 49327

LEON DE VEL MD R
739 PLYMOUTH BLVD S E
GRAND RAPIDS MI 49506

DANIEL A DE VRIES MD
1414 EASTERN AVE S E
GRAND RAPIDS MI 49507

KENT A DEWEY MD
456 CHERRY ST SE
GRAND RAPIDS MI 49503

NANETTE DICE MD
535 GREENWOOD AVE SE
GRAND RAPIDS MI 49506

MARK W DICK MD
146 MONROE AVE N W
GRAND RAPIDS MI 49502

MAJ W L DICKASON MC A
12TH EVAC HOSP BOQ7
APO SAN FRANCISCO 96353

DONALD G DISKEY MD
2015 BRIDGE NW
GRAND RAPIDS MI 49504

WILLIS L DIXON MD
26 SHELDON AVE S E
GRAND RAPIDS MI 49502

LUEBERT DOCTER MD
26 SHELDON AVE S E
GRAND RAPIDS MI 49502

CARREL D DOMANN MD A

HARVEY E DOORENBOS MD A
BOX 1
BAHRAIN ARABIAN GULF

HENRY A DOORN MD
2450 LEE S W
GRAND RAPIDS MI 49509

FRED A DOORNBOS MD
245 STATE ST SE
GRAND RAPIDS MI 49502

WALLACE B DORAIN MD
1810 WEALTHY ST SE
GRAND RAPIDS MI 49506

JOHN L DOYLE MD
2435 EASTERN SE
GRAND RAPIDS MI 49507

WALLACE B DUFFIN MD
221 MICHIGAN ST NE
GRAND RAPIDS MI 49503

ROBERT A DYE MD
124 FULTON ST E
GRAND RAPIDS MI 49502

MERLE L DYKEMA MD A
2301 RIVERSIDE DR N E
GRAND RAPIDS MI 49505

CALVIN J DYKMAN MD
515 LAKESIDE DR SE
GRAND RAPIDS MI 49506

CALVIN J DYKSTRA MD A
312 PROSPECT NE #15
GRAND RAPIDS MI 49503

L EDMOND EARY JR MD
222 HARPER DRIVE
SPARTA MICH 49345

CURTIS D EDHOLM MD
50 COLLEGE AVE SE
GRAND RAPIDS MI 49503

ROBERT L EGGLESTON MD
1514 WEALTHY SE
GRAND RAPIDS MI 49506

HERMAN C ELDERSVELD MD
815 ALGER ST SE
GRAND RAPIDS MICH 49507

MICHAEL E ELLIS M D
2030 LEONARD ST NW
GRAND RAPIDS MICH 49504

JOHN P ENGELS MD
8375 BAILEY DR N E
ADA MICHIGAN 49301

GEO T R FAHLUND MD
920 CHERRY ST SE
GRAND RAPIDS MI 49506

CHAS E FARBER MD
50 COLLEGE AVE SE
GRAND RAPIDS MI 49503

PAUL J FATUM MD
2054 CAMBRIDGE SE
GRAND RAPIDS MICH 49506

L H FEENSTRA MD
833 LAKE DR S E
GRAND RAPIDS MI 49506

KENNETH E FELLOWS MD
515 LAKESIDE SE
GRAND RAPIDS MI 49506

JAMES A FERGUSON MD
72 SHELDON AVE SE
GRAND RAPIDS MI 49502

LOUIS G FERRAND MD
8149 NORTHLAND DR
ROCKFORD MICH 49341

E E FIERENS MD
1041 CAMBRIDGE S E
GRAND RAPIDS MI 49506

RALPH L FITTS MD
50 COLLEGE AVE SE
GRAND RAPIDS MI 49503

ERWIN L FITZGERALD MD
50 COLLEGE AVE SE
GRAND RAPIDS MI 49503

WM M FLINTOFF M D
1632 DIAMOND AVE NE
GRAND RAPIDS MI 49505

J DONALD FLYNN MD
515 LAKESIDE DR SE
GRAND RAPIDS MICH 49506

THOMAS W FOCHTMAN MD
72 E DIVISION
SPARTA MICH 49345

J CLINTON FOSHEE MD L
8400 BAILY DR BOX 131
ADA MICH 49301

JOHN P FOXWORTHY MD
50 COLLEGE AVE SE
GRAND RAPIDS MI 49503

CHARLES H FRANTZ MD
2430 VILLAGE DR S E
GRAND RAPIDS MICH 49506

DAVID W FRICKE MD A
PEACE CORPS US EMBASSY
KABUL AFGHANISTAN

EDSON H FULLER JR MD
514 MEDICAL ARTS BLDG
GRAND RAPIDS MI 49502

RAYMOND E FULLER MD
515 LAKESIDE DR SE
GRAND RAPIDS MI 49506

WM J FULLER MD
515 LAKESIDE DR SE
GRAND RAPIDS MI 49506

KENNETH E GAMM MD
153 LAFAYETTE SE
GRAND RAPIDS MI 49503

LEONARD S GELL MD
515 LAKESIDE DR SE
GRAND RAPIDS MI 49506

HARVEY M GENDLER MD
112 N MONROE
ROCKFORD MI 49341

DONALD G GERARD MD
1150 N HUDSON ST
LOWELL MI 49331

E KENT GIBBS MD A
2891 NORTHVILLE DR NE
GRAND RAPIDS MI 49505

RALPH H GILBERT MD
26 SHELDON AVE SE
GRAND RAPIDS MICH 49502

FREDK S GILLETT MD
50 COLLEGE AVE SE
GRAND RAPIDS MICH 49503

ROBERT W GILLIES MD
100 MICHIGAN ST NE
GRAND RAPIDS MI 49503

SCOTT B GIRARD MD A
113 N SIXTH ST
BISMARCK NO DAKOTA 58501

JAMES R GLESSNER JR MD
825 LEONARD ST NE
GRAND RAPIDS MI 49503

SALOMEA J GOLDBERG MD
515 LAKESIDE DR SE
GRAND RAPIDS MI 49506

C ROBERT GOOD M D
2743 DE HOOP ST SW
GRAND RAPIDS MICH 49509

RUSSELL G GRAFF MD
515 LAKESIDE DR SE
GRAND RAPIDS MI 49506

EDWARD J GRASS MD L
3010 LAKE DR S E
GRAND RAPIDS MI 49506

FRED B GRAY M D
456 CHERRY ST SE
GRAND RAPIDS MI 49503

PERRY W GREENE JR MD
515 LAKESIDE SE
GRAND RAPIDS MI 49506

OLIVER D GRIN JR MD A
679 MANHATTAN DR SE
GRAND RAPIDS MI 49506

CLARE H GROSENBAUGH MD
1810 WEALTHY ST SE
GRAND RAPIDS MICH 49506

JAMES A GUNN MD
1840 WEALTHY ST S E
GRAND RAPIDS MI 49506

ROBT E LEE GUNNING MD
369 GREENWICH RD NE
GRAND RAPIDS MI 49506

WILLIAM HAECK MD
245 STATE ST SE
GRAND RAPIDS MI 49503

ARTHUR K HAMP MD
515 LAKESIDE DR SE
GRAND RAPIDS MI 49506

LAIRD E HAMSTRA MD
515 LAKESIDE DR S E
GRAND RAPIDS MI 49506

MARK P HARMELING MD
124 FULTON ST EAST
GRAND RAPIDS MI 49502

ROBERT W HARRISON MD
1810 WEALTHY ST SE
GRAND RAPIDS MI 49506

ROBERT E HAYES MD
456 CHERRY ST SE
GRAND RAPIDS MI 49503

THOMAS A HAYES MD A
2604 FABER CT
FALLS CHURCH VA 22046

THOS P HAYES MD
1840 WEALTHY ST S E
GRAND RAPIDS MI 49506

JOHN R HEATON MD
2984 FOUNTAINHEAD RD
LARGO FLA 33540

DEWEY R HEETDERKS MD L
240 EDGEHILL AVE SE
GRAND RAPIDS MI 49506

D R HEETDERKS JR MD
26 SHELDON AVE SE
GRAND RAPIDS MI 49502

LOUIS HELDER MD
1947 HUTCHINSON SE
GRAND RAPIDS MI 49506

CHRISTIAN HELMUS MD
203 PARIS AVE SE
GRAND RAPIDS MI 49503

RUTH HERRICK MD L
908 E MAIN ST
LOWELL MICHIGAN 49331

D W HESSELSCHWERDT MD
928 PRINCETON SE
GRAND RAPIDS MICH 49506

A MORGAN HILL MD
50 COLLEGE AVE SE
GRAND RAPIDS MI 49503

JACK W HILL MD
6850 DIVISION AVE S
GRAND RAPIDS MI 49508

C P HODGKINSON II MD
26 SHELDON AVE SE
GRAND RAPIDS MI 49502

ANDREW L HOEKSTRA MD
111 N KIDD
IONIA MI 48846

PHILIP J HOEKSTRA MD
909 FULTON ST E
GRAND RAPIDS MI 49503

ALBERTUS J HOFFS MD
2607 FREDERICKS DR SE
GRAND RAPIDS MI 49506

HENRY D HOLKEBOER MD A
1050 SPAULDING AVE SE
GRAND RAPIDS MI 49506

STEPHEN HOLLANDER MD
1451 GRANDVILLE AVE
GRAND RAPIDS MI 49509

ROBERT S HOLM MD
515 LAKESIDE DR SE
GRAND RAPIDS MI 49506

JACK HOOGERHYDE MD
26 SHELDON AVE SE
GRAND RAPIDS MI 49502

DAVID J HORNING MD
26 SHELDON AVE SE
GRAND RAPIDS MI 49502

BRIAN L HOTCHKISS MD
515 LAKESIDE DR SE
GRAND RAPIDS MI 49506

CHARLES R HOWIE MD
255 WASHINGTON ST SE
GRAND RAPIDS MI 49502

ROBERT L HOYT MD
1810 WEALTHY ST SE
GRAND RAPIDS MI 49506

HARRY C HUDSON MD
50 COLLEGE AVE SE
GRAND RAPIDS MI 49503

A RAY HUFFORD MD L
455 CHERRY SE
GRAND RAPIDS MI 49502

JAMES C HUMPHREY MD
26 SHELDON AVE S E
GRAND RAPIDS MI 49502

MARILYN R HUNTER MD A
BOX 628
PORT AU PRINCE HAITI

F A HUTCHINSON MD
245 STATE ST SE
GRAND RAPIDS MICH 49502

ROBT H HYDRICK MD
1039 W FULTON
GRAND RAPIDS MICH 49504

JAMES R IRWIN MD
26 SHELDON AVE SE
GRAND RAPIDS MI 49502

JERRY L IRWIN MD
26 SHELDON AVENUE SE
GRAND RAPIDS MI 49502

WM W JACK MD
1810 WEALTHY ST S E
GRAND RAPIDS MI 49506

FRED M JAMESON MD
833 LAKE DR SE
GRAND RAPIDS MI 49506

WALTER J JARACZ MD L
634 BRIDGE ST N W
GRAND RAPIDS MI 49504

WALTER J JARACZ JR MD
2410 GAYNOR AVE NW
GRAND RAPIDS MI 49504

ROBT W JARKA MD
50 COLLEGE AVE SE
GRAND RAPIDS MI 49503

CHAS JARVIS JR MD A
218 SLIGH BLVD NE
GRAND RAPIDS MI 49505

WILLIAM B JENSEN JR MD
425 CHERRY SE
GRAND RAPIDS MICH 49502

DONALD C JOHNS MD
655 BROADVIEW ST S E
GRAND RAPIDS MI 49507

LARRY S JOHNSGARD MD A
245 STATE ST S E
GRAND RAPIDS MI 49502

DAN W JOHNSTON MD
2440 BEECHWOOD SE
GRAND RAPIDS MI 49506

WM L JOHNSTON MD
245 STATE ST SE
GRAND RAPIDS MI 49502

EDWARD A JONES MD
346 WEALTHY ST SE
GRAND RAPIDS MI 49503

HAVEN E JONES MD
833 LAKE DR S E
GRAND RAPIDS MICH 49506

JOHN D L JUI MD
4234 LAKE MICH DR NW
GRAND RAPIDS MI 49504

ALEKSANDRS KALNINS MD
1052 EASTERN AVE NE
GRAND RAPIDS MI 49503

L A KAMMERAAD MD
1810 WEALTHY ST SE
GRAND RAPIDS MICH 49506

PAUL E KASCHEL MD
1330 BRADFORD ST NE
GRAND RAPIDS MI 49503

DONALD E KELLEY MD
515 LAKESIDE DR SE
GRAND RAPIDS MI 49506

DAVID W KEMPERS MD
50 COLLEGE AVENUE SE
GRAND RAPIDS MICH 49503

ALBERT H KEMPTER MD
1200 LAKE DR S E
GRAND RAPIDS MI 49506

DALE L KESSLER MD
540 BELVEDERE DR SE
GRAND RAPIDS MI 49506

CONN W KETCHAM MD A
3650 TAFT SW
GRAND RAPIDS MI 49509

YOUN S KIM MD
1810 WEALTHY ST SE
GRAND RAPIDS MI 49506

WILLIAM E KINCAID MD
100 MICHIGAN ST NE
GRAND RAPIDS MI 49503

JACOB E KLEIN MD M
RR 2 BOX 30
BANGOR MI 49013

THOMAS E KLEIN MD
2740 EASTERN SE
GRAND RAPIDS MICH 49507

JAMES T KLOMPARENS MD
1662 MORNINGSIDE SE
GRAND RAPIDS MI 49506

PAUL W KNISKERN MD
26 SHELDON AVE S E
GRAND RAPIDS MI 49502

BERNARD P KOOL MD
445 CHERRY ST S E
GRAND RAPIDS MI 49503

BERT J KORHONEN MD
26 SHELDON AVE SE
GRAND RAPIDS MI 49502

SYLVIA M KOSCIOLEK MD
201 LAFAYETTE AVE SE
GRAND RAPIDS MI 49503

HARM KRAAI MD A
100 MICHIGAN ST N E
GRAND RAPIDS MI 49503

CHARLES F KRECKE MD
201 LAFAYETTE AVE SE
GRAND RAPIDS MICH 49503

HENRY J KREULEN MD
2135 ONEKEMA DR S E
GRAND RAPIDS MI 49506

RICHARD L KREUZER MD A
470 TUTTLE N E
GRAND RAPIDS MI 49503

FRANK J KRHOVSKY MD
153 LAFAYETTE AVE SE
GRAND RAPIDS MI 49503

WM T KRUSE JR MD A
3044 HALL ST S E
GRAND RAPIDS MI 49506

K V KUIPER MD
2208 MADISON AVE SE
GRAND RAPIDS MI 49507

ROBT G LAIRD MD L
435 CHERRY ST SE
GRAND RAPIDS MICH 49502

RUTH E LALIME MD
52 BURTON ST W
GRAND RAPIDS MI 49507

AUSTIN E LAMBERTS MD A
1520 LEFFINGWELL NE
GRAND RAPIDS MI 49505

RAMON B LANG MD
1520 PLAINFIELD AVE NE
GRAND RAPIDS MI 49505

JOS H LEEP MD
1545 DIAMOND AVE NE
GRAND RAPIDS MI 49505

JOS R LENTINI MD
303 FULTON ST E
GRAND RAPIDS MI 49502

C A LEUZ 111 MD A
331 HOLMDENE BLVD N E
GRAND RAPIDS MI 49503

ROBERT S LEVINE MD
50 COLLEGE AVE SE
GRAND RAPIDS MI 49503

GEO H LEWIS MD
3181 PRAIRIE S W
GRANDVILLE MI 49418

HARRY LIEFFERS MD L
26 SHELDON AVE S E
GRAND RAPIDS MI 49502

WILLIAM T LINCER MD
833 LAKE DR S E
GRAND RAPIDS MI 49506

KENNETH E LOBBES MD
425 CHERRY ST S E
GRAND RAPIDS MI 49502

JAMES W LOGIE MD
RAMONA MEDICAL CENTER
GRAND RAPIDS MICH 49506

F RAYMER LOVELL JR MD A
2ND FIELD HOSPITAL APO
NEW YORK NY 09069

R J LOVETT JR MD A
1320 PLYMOUTH RD S E
GRAND RAPIDS MI 49506

JACK G LUKENS MD
245 STATE ST SE
GRAND RAPIDS MI 49502

DUGALD S MAC INTYRE MD
515 LAKESIDE DR SE
GRAND RAPIDS MI 49506

JAMES T MAHER MD
320 MEDICAL ARTS BLDG
GRAND RAPIDS MI 49502

JEROME F MANCEWICZ MD
1156 LEONARD ST NW
GRAND RAPIDS MICH 49504

JOS D MANN MD
100 MICHIGAN ST NE
GRAND RAPIDS MI 49503

JOHN P MARSH MD L
35 BEL AIR DR NE
GRAND RAPIDS MI 49503

STEPHEN K MARSH MD
6143 28TH ST SE
GRAND RAPIDS MI 49506

ROBERT B MARSHALL MD
100 MICHIGAN ST NE
GRAND RAPIDS MI 49503

MARTIN MARTINUS MD
750 FULLER AVENUE NE
GRAND RAPIDS MI 49503

JOHN A MARVIN MD
833 LAKE DR S E
GRAND RAPIDS MI 49506

WARREN B MASON MD
50 COLLEGE AVE SE
GRAND RAPIDS MI 49503

C J MATERNOWSKI MD
515 LAKESIDE DR SE
GRAND RAPIDS MI 49506

RALPH E MATHIS MD
245 STATE ST SE
GRAND RAPIDS MI 49502

LELAND R MATTHEWS MD A
1509 ARDMORE S E
GRAND RAPIDS MI 49507

T C MAYCROFT MD
238 BRISTOL AVE NW
GRAND RAPIDS MI 49504

MASON S MAYNARD MD
445 CHERRY ST SE
GRAND RAPIDS MI 49503

JAMES D MAYS MD A
1700 BROOKLYN
LOS ANGELES CA 90033

W PATRICK MAZIER MD
72 SHELDON AVE SE
GRAND RAPIDS8 MI 49502

JOHN K MC CORMICK MD
122 CALEDONIA NE
GRAND RAPIDS MI 49505

WM J MC DOUGAL MD
1011 E FULTON ST
GRAND RAPIDS MI 49503

ORVAL I MC KAY MD
1150 N HUDSON ST
LOWELL MICH 49331

LELAND M MC KINLAY MD R
403 DIXIE DR SOUTH
HOWEY IN HILLS FL 32737

MYRTLE S MCLAIN MD
645 OAKLEIGH RD NW
GRAND RAPIDS MI 49504

RICHARD H MEADE JR MD A
750 SAN JOSE DRIVE
GRAND RAPIDS MI 49506

WALTER D MEESTER MD A
1840 WEALTHY ST SE
GRAND RAPIDS MI 49506

GAYLE H MEHNEY M D
245 STATE ST SE
GRAND RAPIDS MI 49502

JUDITH L MEYER MD
1756 NEWARK AVE SE
GRAND RAPIDS MI 49507

JAMES A MILLARD MD
1553 BOSTON ST SE
GRAND RAPIDS MI 49507

J D MILLER MD
50 COLLEGE AVE SE
GRAND RAPIDS MI 49503

THEO P MILLER MD
833 LAKE DRIVE SE
GRAND RAPIDS MI 49506

CARL H MOBERG MD
72 CHARLESTON SQ #27
EUCLID OHIO 44117

CORNETTA G MOEN MD L
844 LEFFINGWELL RD NE
GRAND RAPIDS MI 49506

JOSEPH V MOLESKI M D
26 SHELDON AVE S E
GRAND RAPIDS MICH 49502

LEO T MOLESKI MD
26 SHELDON AVE S E
GRAND RAPIDS MICH 49502

STANLEY L MOLESKI MD A
1701 PONTIAC RD SE
GRAND RAPIDS MI 49506

ARTHUR M MOLL MD L
146 156 MONROE AVE NW
GRAND RAPIDS MI 49502

ARTHUR H MOLLMANN MD L
506 MULFORD DR SE
GRAND RAPIDS MI 49507

JOHN C MONTGOMERY MD
1810 WEALTHY ST S E
GRAND RAPIDS MI 49506

DOUGLAS P MOORE MD
515 LAKESIDE DR SE
GRAND RAPIDS MI 49506

JOSEPH S MOORE MD
1520 PLAINFIELD NE
GRAND RAPIDS MI 49505

E L MOORHEAD II MD
100 MICHIGAN ST NE
GRAND RAPIDS MI 49503

DIRK R MOUW MD
1854 S DIVISION AVE
GRAND RAPIDS MI 49507

G ARTHUR MULDER MD
1414 EASTERN AVE SE
GRAND RAPIDS MI 49507

JAMES P MULDOON MD
72 SHELDON AVE SE
GRAND RAPIDS MICH 49502

MILES J MURPHY MD
153 LAFAYETTE AVE SE
GRAND RAPIDS MI 49503

ROBT M NALBANDIAN MD
2812 OAKWOOD DR
E GRAND RAPIDS MI 49506

REINARD P NANZIG MD
153 LAFAYETTE SE
GRAND RAPIDS MI 49503

JOHN P NEWTON MD
1632 DIAMOND AVE NE
GRAND RAPIDS MI 49505

KENNETH C NICKEL MD
833 LAKE DRIVE SE
GRAND RAPIDS MICH 49506

MELVIN L NOAH MD

MIDDLEVILLE MI 49333

M SAMUEL NOORDHOFF MD A
92 N CHUNG SHAM SEC 2
TAIPEI TAIWAN

PETER B NORTHOUSE MD
26 SHELDON AVE S E
GRAND RAPIDS MI 49502

VICTOR A NOTIER MD
50 COLLEGE AVE SE
GRAND RAPIDS MI 49503

SAML M OATES MD
245 STATE ST SE
GRAND RAPIDS MI 49502

JAMES D O BRIEN MD
1156 LEONARD ST NW
GRAND RAPIDS MI 49504

WM G O DRISCOLL MD
515 LAKESIDE DR SE
GRAND RAPIDS MI 49502

RICHARD L ORDERS MD
255 WASHINGTON SE
GRAND RAPIDS MI 49502

RALPH W ORTWIG MD
50 COLLEGE AVE S E
GRAND RAPIDS MI 49503

ERNEST L OVERBEEK M D
26 SHELDON AVE S E
GRAND RAPIDS MICH 49502

AVNI D OZKAN MD
1444 MICHIGAN NE
GRAND RAPIDS MI 49503

RUSSELL J PAALMAN MD
26 SHELDON AVE S E
GRAND RAPIDS MI 49502

THERESA A PALASZEK MD
833 LAKE DR S E
GRAND RAPIDS MICH 49506

WM J PASSINAULT MD
26 SHELDON AVE SE
GRAND RAPIDS MI 49502

MARSHALL PATTULLO MD
515 LAKESIDE DR SE
GRAND RAPIDS MI 49506

C ALLEN PAYNE MD L
1840 WEALTHY ST
GRAND RAPIDS MICH 49506

JOHN R PEDDEN MD
445 CHERRY ST S E
GRAND RAPIDS MI 49503

JOHN C PEIRCE MD
201 LAFAYETTE AVE SE
GRAND RAPIDS MI 49503

WARREN C PILLING MD
833 LAKE DR SE
GRAND RAPIDS MI 49506

M S PISKIN MD
1077 LEONARD ST NE
GRAND RAPIDS MI 49503

JOHANNES D PLEKKER MD
833 LAKE DR SE
GRAND RAPIDS MI 49506

LEE R POOL MD
245 STATE ST SE
GRAND RAPIDS MI 49502

HOWARD P PORTER JR MD
2743 DE HOOP ST SW
GRAND RAPIDS MI 49509

ALBERT E POSTHUMA MD
153 LAFAYETTE SE
GRAND RAPIDS MI 49503

EDWARD Y POSTMA MD
245 STATE ST SE
GRAND RAPIDS MI 49503

HOWARD F POSTMA MD
3860 CHICAGO DR SW
GRANDVILLE MICH 49418

E JAMES POTCHEN MD A
E MALLINCKRODT
INST OF RADIOLOGY
510 KINGSHIGHWAY
ST LOUIS MO 63110

ABRAHAM L POTT MD L
1011 FULTON ST E
GRAND RAPIDS MI 49503

WINSTON B PROTHRO MD
1619 WALKER ST NW
GRAND RAPIDS MI 49504

ROBERT H PUITE MD
515 LAKESIDE DR SE
GRAND RAPIDS MI 49506

LEONARD L RADECKI MD A
925 MAYBELLE NE
GRAND RAPIDS MI 49503

ROBERT J RAIMAN MD
50 COLLEGE AVE SE
GRAND RAPIDS MICH 49503

L PAUL RALPH MD
5075 EGYPT VALLEY N E
BELMONT MI 49306

RICHARD A RASMUSSEN MD
BLODGETT MED BLDG
GRAND RAPIDS MI 49501

D F REARDON MD
1168 NIXON NW
GRAND RAPIDS MI 49504

WM F REUS JR MD
153 LAFAYETTE AVE SE
GRAND RAPIDS MI 49503

ROBERT K RICHMOND MD
24 BURTON ST SE
GRAND RAPIDS MI 49507

JAMES M RIEKSE MD
2740 EASTERN AVE SE
GRAND RAPIDS MI 49507

JOHN C RIENSTRA MD
833 LAKE DR SE
GRAND RAPIDS MI 49506

J C RINGENBERG MD
50 COLLEGE AVE SE
GRAND RAPIDS MI 49503

CHAS S ROBB MD
445 CHERRY ST SE
GRAND RAPIDS MI 49503

JOHN H ROBBERT MD
2911 TIMBER LANE
GRANDVILLE MI 49418

WM G ROBINSON MD
6850 DIVISION AVE SO
GRAND RAPIDS MI 49508

LARRY J ROBSON MD A
1967 JIROCH
MUSKEGON MI 49442

WM L RODGERS MD
2865 LAKE DR SE
GRAND RAPIDS MICH 49506

LUIS R RODRIGUEZ MD
50 COLLEGE AVE SE
GRAND RAPIDS MI 49503

JACK L ROMENCE MD A
2533 ABBINGTON DR SE
GRAND RAPIDS MI 49506

WENDELL H ROOKS MD
1339 PLAINFIELD NE
GRAND RAPIDS MICH 49505

WILLIAM ROOSENBERG MD
411 J WATERS BLDG
GRAND RAPIDS MICH 49502

LEONARD ROSENZWEIG MD
515 LAKESIDE DR SE
GRAND RAPIDS MI 49506

EMIL M ROTH MD A
202 S W 63RD AVE
PLANTATION FL 33314

O W ROTTSCHAFER MD
50 COLLEGE AVE SE
GRAND RAPIDS MI 49503

JOHN A RUPKE MD
221 MICHIGAN ST NE
GRAND RAPIDS MICH 49503

THEO J RUPP MD
842 GIDDINGS AVE S E
GRAND RAPIDS MI 49506

JOHN A RYAN MD
153 LAFAYETTE SE
GRAND RAPIDS MI 49503

J J RYSKAMP JR MC M
U S NAVAL HOSPITAL
PLASTIC SURG SERV

PHILADELPHIA PA 19145

JAMES SCHARPHORN MD
P O BOX 174
GRANDVILLE MI 49418

HOWARD J SCHAUBEL MD
124 FULTON ST E
GRAND RAPIDS MI 49502

DONALD C SCHEK MD
2749 CLYDE PARK SW
GRAND RAPIDS MI 49508

L J SCHERMERHORN MD R
2317 VINE HILL RD
SANTA CRUZ CA 95062

RALPH J SCHLOSSER M D
456 CHERRY ST SE
GRAND RAPIDS MI 49503

GEO R SCHNEIDER MD
1810 WEALTHY ST SE
GRAND RAPIDS MI 49506

ELMER W SCHNOOR MD L
844 IROQUOIS DRIVE S E
GRAND RAPIDS MI 49506

LOUISE F SCHNUTE MD
146 MONROE N W
GRAND RAPIDS MI 49502

PAUL G SCHUTT MD
500 CHERRY ST S E
GRAND RAPIDS MI 49503

THOS G SCHWADERER MD
500 CHERRY ST SE
GRAND RAPIDS MI 49503

WM B SCOTT MD
26 SHELDON AVE SE
GRAND RAPIDS MI 49502

ALISON W SCRIMGEOUR A
2260 NELSON SE APT C
GRAND RAPIDS MI 49507

RAYMOND E SCULLEY MD
20 BURTON ST S E
GRAND RAPIDS MICH 49507

J A SENTKERESTY MD
515 LAKESIDE DR SE
GRAND RAPIDS MI 49506

C A SETTERSTROM MD
734 ALGER ST S E
GRAND RAPIDS MI 49507

EUGENE S SEVENSMA MD
124 FULTON ST EAST
GRAND RAPIDS MI 49502

MARTIN SHARDA M D
300 36TH ST SW
GMC PLANT #1

GRAND RAPIDS MICH 49508

ROBERT B SHARP MD
833 LAKE DR SE
GRAND RAPIDS MI 49506

RICHARD H SIDELL MD
515 LAKESIDE DR S E
GRAND RAPIDS MI 49506

BERNARD H SIEBERS MD
P O BOX 6189
GRAND RAPIDS MI 49506

ALAN E SIEGEL MD
1810 WEALTHY ST S E
GRAND RAPIDS MI 49506

WILLIAM D SIMPSON MD
2777 NIPAWIN CT NE
GRAND RAPIDS MI 49505

JOHN S SLUYTER MD
750 FULLER AVE N E
GRAND RAPIDS MI 49503

DEAN B SMITH MD
4236 KALAMAZOO SE
GRAND RAPIDS MI 49508

DEAN T SMITH MD A
2111 EASTERN AVE NE
GRAND RAPIDS MI 49505

JOHN H SMITH MD
1840 WEALTHY ST SE
GRAND RAPIDS MI 49506

ROBT B SMITH MD
26 SHELDON AVE SE
GRAND RAPIDS MI 49502

ROLAND G SNEARLY MD A
BP13 BAPTIST MISSION
KOUMRA REPUBLIQUE

DU TCHAD AFRICA

JOHN D SNIDER MD
1827 ARGENTINA DR SE
GRAND RAPIDS MICH 49506

CLARENCE A SNYDER MD
2463 COLLEGE AVE SE
GRAND RAPIDS MI 49507

T H SOUTHWELL MD
26 SHELDON AVE SE
GRAND RAPIDS MI 49502

C H SOUTHWICK MD
515 LAKESIDE DR SE
GRAND RAPIDS MI 49506

G HOWARD SOUTHWICK MD L
515 LAKESIDE SE
GRAND RAPIDS MI 49506

WM E SPRAGUE MD
933 LEONARD ST NW
GRAND RAPIDS MI 49504

WILLARD S STAWSKI MD A
816 PINECREST AVE SE
GRAND RAPIDS MI 49506

W H STEFFENSEN MD
1810 WEALTHY ST SE
GRAND RAPIDS MICH 49506

GARNET G STONEHOUSE MD R
408 MEDICAL ARTS BLDG
GRAND RAPIDS MI 49502

FERNLEY STONEMAN MD
3181 PRAIRIE ST SW
GRANDVILLE MI 49418

VIRGIL E STOVER MD
545 LAKESIDE DR SE
GRAND RAPIDS MI 49506

LEROY E STRONG MD
515 LAKESIDE DR SE
GRAND RAPIDS MI 49506

CULLEN E SUGG MD L
3175 CASCADE RD SE
GRAND RAPIDS MI 49506

TETSUO SUGIYAMA MD
26 SHELDON AVENUE SE
GRAND RAPIDS MI 49502

KEH MING SUN MD
ST MARYS HOSP LAB
GRAND RAPIDS MI 49503

JEROME W SWAN MD
26 SHELDON AVE SE
GRAND RAPIDS MI 49502

ALFRED B SWANSON MD
1810 WEALTHY ST S E
GRAND RAPIDS MI 49506

HAROLD C SWENSON MD
124 FULTON ST E
GRAND RAPIDS MI 49502

MAJ T M TALBOTT MC A
FRANCIS E WARREN AFB
CHEYENNE WYOMING 82001

JOSEPH L TAYLOR MD
1033 FULTON ST W
GRAND RAPIDS MI 49504

JOHN TEN HAVE MD L
3515 BRIGGS BLVD N E
GRAND RAPIDS MI 49505

DONALD H TER KEURST MD
2740 EASTERN AVE SE
GRAND RAPIDS MI 49507

ARTHUR J TESSEINE MD
3000 MONROE AVE NW
GRAND RAPIDS MI 49505

PAUL G THEODORE MD
1520 PLAINFIELD AVE NE
GRAND RAPIDS MI 49505

ATHOL B THOMPSON MD L
1857 GOLDEN RAIN RD #2
WALNUT CREEK CA 94595

EDWARD C THOMPSON MD
153 LAFAYETTE AVE SE
GRAND RAPIDS MI 49503

FRANK D THOMPSON MD
2008 EL DORADO DR SE
EAST GRAND RAPIDS MI 49506

JOS C TIFFANY MD
502 MEDICAL ARTS BLDG
GRAND RAPIDS MI 49501

LUIS A TOMATIS MD
456 CHERRY ST SE
GRAND RAPIDS MI 49503

WM R TORGERSON MD L
515 LAKESIDE DR S E
GRAND RAPIDS MI 49506

JACK H TOWNSEND MD
515 LAKESIDE DR SE
GRAND RAPIDS MI 49506

ROBT L TROSKE MD
534 DOGWOOD DR NE
ADA MI 49301

CLARENCE P TRUOG MD
833 LAKE DR S E
GRAND RAPIDS MI 49506

V J TURCOTTE JR MD
515 LAKESIDE DR SE
GRAND RAPIDS MI 49506

VERNON D VAANDRAGER MD
245 STATE ST SE
GRAND RAPIDS MI 49502

F VALDMANIS MD
2120 LAKE DR SE
GRAND RAPIDS MI 49506

RAYMOND S VAN BREE MD
812 ROSALIE NW
GRAND RAPIDS MI 49504

FORREST R VAN DAM MD
1810 WEALTHY ST SE
GRAND RAPIDS MICH 49506

A R VANDEN BERG MD
833 LAKE DR SE
GRAND RAPIDS MI 49506

WM VANDENBERG MD
124 FULTON ST E
GRAND RAPIDS MICH 49502

WM O VANDEN BERG MD
50 COLLEGE AVE SE
GRAND RAPIDS MI 49503

H L VANDER KOLK MD
611 ROSEWOOD AVE SE
GRAND RAPIDS MI 49506

K J VANDER KOLK MD
2740 EASTERN AVE SE
GRAND RAPIDS MI 49507

RAYMOND VANDER MEER MD
26 SHELDON AVE S E
GRAND RAPIDS MI 49502

JOHN VANDERMOLEN MD
124 FULTON ST E
GRAND RAPIDS MI 49502

R A VANDER PLOEG MD
26 SHELDON AVE SE
GRAND RAPIDS MICH 49502

WM H VANDER PLOEG MD
833 LAKE DR SE
GRAND RAPIDS MI 49506

CORWIN G VAN DER VEER
245 STATE ST SE
GRAND RAPIDS MI 49502

G M VAN DOMMELEN MD
245 STATE ST SE
GRAND RAPIDS MI 49502

HENRY J VAN DUINE MD
153 LAFAYETTE SE
GRAND RAPIDS MI 49503

HAROLD E VAN DYKE MD
1108 LEONARD ST NE
GRAND RAPIDS MICH 49503

KORNELIUS VAN GOOR MD
26 SHELDON AVE S E
GRAND RAPIDS MI 49502

CORNELIS VAN NUIS MD
245 STATE ST SE
GRAND RAPIDS MI 49502

G F VAN OTTEREN MD
245 STATE ST SE
GRAND RAPIDS MI 49502

PAUL VAN PORTFLIET MD
245 STATE ST SE
GRAND RAPIDS MI 49502

ANDREW A VANSOLKEMA MD L
953 E FULTON ST
GRAND RAPIDS MICH 49503

ALBERT VAN T HOF MD
50 COLLEGE AVE SE
GRAND RAPIDS MI 49503

R J VAN VALKENBURG MD
6850 DIVISION AVE SO
GRAND RAPIDS MI 49506

PETER D VAN VLIET MD
100 MICHIGAN ST N E
GRAND RAPIDS MI 49503

B R VAN ZWALENBURG MD
2116 CORONADO DR SE
GRAND RAPIDS MI 49506

C MARK VASU MD
833 LAKE DRIVE SE
GRAND RAPIDS MICH 49506

HAROLD E VELDMAN MD L
26 SHELDON AVE
GRAND RAPIDS MI 49502

JAY H VELTMAN MD
3946 G 30TH ST
GRANDVILLE MICHIGAN 49418

JAY R VENEMA MD
540 OVERBROOK LANE S E
GRAND RAPIDS MI 49507

GLENN P VERBRUGGE MD A
468 TUTTLE AVE N E
GRAND RAPIDS MI 49503

JOHN VER MEULEN MD L
201 HILLVIEW NE
GRAND RAPIDS MI 49509

PETER VER MEULEN MD A
105 BAYNTON N E
GRAND RAPIDS MI 49503

A L HUBERT VERWYS MD
815 ALGER ST S E
GRAND RAPIDS MI 49507

KEATS K VINING JR MD
515 LAKESIDE DR SE
GRAND RAPIDS MICH 49506

H C VISSCHER MD
515 LAKESIDE DR SE
GRAND RAPIDS MI 49506

ROBERT D VISSCHER MD
515 LAKESIDE DRIVE SE
GRAND RAPIDS MI 49506

EARL R VISSER MD
530 OVERBROOK LANE SE
GRAND RAPIDS MI 49507

ANTON VOGEL MD
1204 MADISON AVE S E
GRAND RAPIDS MICH 49507

JAMES S VOLKEL MD
833 LAKE DRIVE SE
GRAND RAPIDS MI 49506

JOHN A VOSS MD
2410 GAYNOR AVE NW
GRAND RAPIDS MI 49504

JOHN VROON MD
50 COLLEGE AVE SE
GRAND RAPIDS MI 49503

JAY D VYN MD L
7119 DRIFTWOOD S E
GRAND RAPIDS MI 49506

ELMER F WAHBY MD
100 MICHIGAN ST NE
GRAND RAPIDS MI 49503

TED J WALLER MD A
1115 LAKESIDE DR SE
GRAND RAPIDS MI 49506

DANIEL WALMA MD
26 SHELDON AVENUE SE
GRAND RAPIDS MI 49502

LLOYD A WALWYN MD A
1147 COOPER ST S E
GRAND RAPIDS MI 49507

MARY GRACE W-DUNLOP MD A
1840 WEALTHY ST SE
GRAND RAPIDS MI 49506

ROGER N WASSINK MD
26 SHELDON AVE SE
GRAND RAPIDS MI 49502

DONALD F WATERMAN MD
515 LAKESIDE DR SE
GRAND RAPIDS MICH 49506

JAMES K WATKINS MD
26 SHELDON AVE SE
GRAND RAPIDS MI 49502

P L WATTERSON MD A
3626 CAMELOT DR S E
GRAND RAPIDS MI 49506

CLARENCE F WEBB MD
833 LAKE DR S E
GRAND RAPIDS MI 49503

JEROME E WEBBER MD
50 COLLEGE AVE SE
GRAND RAPIDS MI 49503

THOMAS A WEEBER MD
3181 PRAIRIE S W
GRANDVILLE MICH 49418

R A WEHRENBERG MD
833 LAKE DR SE
GRAND RAPIDS MI 49506

JACK E WEIGLE MD A
249 A STONYHILL RD
EATONTOWN N J 07724

KEITH E WELLER MD
1200 LAKE DRIVE S E
GRAND RAPIDS MI 49506

VERNON E WENDT MD
937 FULTON ST W
GRAND RAPIDS MI 49504

ROBERT J WESTERHOFF MD
808 ALGER ST SE
GRAND RAPIDS MICH 49507

JOS F WHINERY MD
50 COLLEGE AVE SE
GRAND RAPIDS MI 49503

JOHN D WHITEHOUSE MD
1201 COLORADO AVE S E
GRAND RAPIDS MI 49506

R N WHITTENBERGER M D
245 STATE ST SE
GRAND RAPIDS MI 49502

JOHN L WIESE MD
50 COLLEGE AVE SE
GRAND RAPIDS MI 49503

REX G WILCOX MD A
757 PACIFIC
MONTEREY CALIF 93940

MORRIS WILDEROM MD R
6495 TWO MILE RD
ADA MI 49301

JOHN B WILKES MD
833 LAKE DR SE
GRAND RAPIDS MI 49506

C A WILKINSON MD
1745 VESTA LANE SE
GRAND RAPIDS MICH 49506

HARVEY S WILKS MD A
1029 SAN JOSE DR SE
GRAND RAPIDS MI 49506

JOHN R WILLIAMS MD
833 LAKE DR SE
GRAND RAPIDS MICH 49506

JOHN R WILSON MD
1033 FULTON ST WEST
GRAND RAPIDS MI 49503

ROBERT J WILSON MD
1085 LEONARD ST N E
GRAND RAPIDS MI 49503

GARRETT E WINTER MD
1967 GODFREY AVE S W
GRAND RAPIDS MI 49509

JEROME J WISNESKI MD
26 SHELDON AVE S E
GRAND RAPIDS MI 49502

DONALD D WORCESTER MD
50 COLLEGE AVE SE
GRAND RAPIDS MI 49503

THOS B WRIGHT MD A
2614 PLAINFIELD AVE NE
GRAND RAPIDS MI 49505

JOHN F WURZ MD
201 NORWOOD AVE S E
GRAND RAPIDS MI 49506

MARTIN K WYNGAARDEN MD
245 STATE ST SE
GRAND RAPIDS MI 49503

JEROME A YARED MD
651 CHERRY ST SE
GRAND RAPIDS MI 49506

WILLIAM G YOST JR MD
50 COLLEGE AVE SE
GRAND RAPIDS MI 49503

DONALD G YOUNG MD
100 MICHIGAN ST N E
GRAND RAPIDS MICH 49503

Z ZADVINSKIS MD
833 LAKE DR SE
GRAND RAPIDS MI 49506

WM G ZIMMERMAN MD
435 CHERRY SE
GRAND RAPIDS MI 49502

GLENN A ZIMMERMANN MD A
2871 MANITOU DR NE
GRAND RAPIDS MI 49505

RODGER J ZWEMER MD A
7309 KEISLER WAY
LOUISVILLE KY 40222

LAPEER

ANTHONY M ABRUZZO MD
LAPEER STATE HOME
LAPEER MICHIGAN 48446

ISAK O BERKER MD
912 N STATE ST
DAVISON MICHIGAN 48423

G CLARE BISHOP MD L
ALMONT MICH 48003

LEON R BORUCH MD
834 LIBERTY ST
LAPEER MICH 48446

CHAS E CONAWAY MD
1257 N MAIN ST
LAPEER MICHIGAN 48446

JAMES R DOTY MD
315 CLAY ST
LAPEER MICH 48446

CORNELL GREAVU JR MD
NORTH BRANCH MICH 48461

M BENNET HANEY MD
145 N MAIN ST
ALMONT MICHIGAN 48003

WM C HEITSCH MD
3257 DAVISON RD
LAPEER MI 48446

INDUDHAR S HIREMATH MD A
LAPEER STATE HOME
LAPEER MI 48446

CLIFFORD HOUSE MD
1750 GREY RD
LAPEER MICH 48446

E G KIEHLER II MD
3257 DAVISON RD
LAPEER MI 48446

S J KIM MD
P O BOX 151
NEW HARTFORD N Y 13413

LUBOMIRA KOCUR MD
DRAWER A
LAPEER MICH 48446

EMIL LEBEDOVYCH MD L
6457 LOTUS COURT
WATERFORD MI 48095

KSENIA LEBEDOVYCH MD R
6457 LOTUS COURT
WATERFORD MI 48095

DOROTHY L LEITH MD
240 MAIN ST
IMLAY CITY MICH 48444

STANLEY M LYNK MD
4589 LIPPINCOTT
LAPEER MICHIGAN 48446

ELLEN SMITH MD A
400 WHITE RD R 1
COLUMBIAVILLE MI 48421

GLENN L SMITH MD
6552 IMLAY CITY RD
IMLAY CITY MICH 48444

EROL UCER MD
8335 BRITTANY HILL CT
GRAND BLANC MI 48439

VINCENTE UY MD A
1218 OREGON ST
LAPEER MI 48446

H R ZEMMER MD
N MAIN ST
LAPEER MI 48446

CARL R ZOLLIKER MD R
2255 BETHEL BLVD
BOCA RATON FL 33432

LENAWEE

A O ABRAHAM MD
806 W MICH AVE #205-E
JACKSON MI 49202

RUSSELL A ALLEN MD
689 STOCKFORD DR
ADRIAN MICHIGAN 49221

HERMINIO ARMOVIT MD
236 S FOURTH ST
ONSTED MICHIGAN 49265

JOSEPH F BACHMAN MD
602 E POTTAWATAMIE ST
TECUMSEH MI 49286

F W BALICE MD
128 E BUTLER ST
ADRIAN MICHIGAN 49221

LEONARDO BAYLON MD
MILL RD
ADRIAN MI 49221

WILFRIDO L BAYLON MD
MILL ROAD
ADRIAN MI 49221

CARL A BENZ MD
308 N BROAD ST
ADRIAN MICH 49221

JOHN BERGHUIS M D
225 RIVERSIDE AVE
ADRIAN MICHIGAN 49221

LOWELL E BLANCHARD MD
HUDSON MI 49247

MERWIN R BLANDEN MD
TECUMSEH MI 49286

JAMES W BOYD MD
4510 SOUTHGATE LANE
ADRIAN MICHIGAN 49221

LARRY T BURCH MD
10 CAIRNS ST
TECUMSEH MI 49286

RICHARD D COAK MD
308 W CHICAGO BLVD
TECUMSEH MICH 49286

EDWARD D CONNER MD
3 SCOTT COURT
ADRIAN MI 49221

CARLTON L COOK MD
603 E POTTAWATAMIE
TECUMSEH MICH 49286

R A DICCION MD
MORENCI MI 49256

HARRY M DICKMAN MD
104 OAK ST
HUDSON MICHIGAN 49247

E J DRANGINIS MD
HERRICK MEM HOSP
TECUMSEH MI 49286

RICHARD E DUSTIN MD
103 W BROWN ST
TECUMSEH MICH 49286

HOWARD R C EDDY MD
MILL RD
ADRIAN MICH 49221

FERENC FABOK MD
602 E POTTAWATAMIE ST
TECUMSEH MI 49286

JAMES L FEENEY MD
MILL ST
ADRIAN MICHIGAN 49221

M GALLIANI MD
4410 EVERGREEN DR
ADRIAN MICHIGAN 49221

RICHARD H GASCOIGNE MD
225 RIVERSIDE AVE
ADRIAN MI 49221

WILLIAM C GILKEY MD
693 STOCKFORD DRIVE
ADRIAN MICH 49221

RICHARD GILMARTIN MD
MILL ST
ADRIAN MICH 49221

ROBERT A GREINER MD
PROFESSIONAL BLDG
ADRIAN MICHIGAN 49221

JOHN HAMILTON MD
MILL ST
ADRIAN MICHIGAN 49221

GORDON HAMMERSLEY MD
1361 OREGON RD
ADRIAN MICHIGAN 49221

ROBT E HARRISON MD
410 BRENOT COURT
BLISSFIELD MICH 49228

CHAS H HEFFRON MD
231 N MAIN ST
ADRIAN MICH 49221

C HAROLD HEFFRON MD L
231 N MAIN ST
ADRIAN MI 49221

HOWARD H HEFFRON MD
231 N MAIN ST
ADRIAN MICH 49221

RALPH F HELZERMAN MD
112 S OTTAWA ST
TECUMSEH MICH 49286

WM H HEWES MD A
YPSILANTI STATE HOSP
YPSILANTI MI 48197

PHILIP HUNT MD
MILL ST
ADRIAN MI 49221

FRANCIS A LOCKE MD
755 HIGH ST
ADRIAN MICHIGAN 49221

P LYNFORD MILLER MD R
308 E MAUMEE ST
ADRIAN MI 49221

ELLI MOELLER-FABOK MD
602 E POTTAWATAMIE ST
TECUMSEH MI 49286

HAROLD D OCAMB MD
600 E POTTAWATAMIE
TECUMSEH MICH 49286

DONALD A PARKER MD
BIXBY HOSPITAL
ADRIAN MICH 49221

BERNARD PATMOS MD
127 E MAUMEE ST
ADRIAN MICH 49221

ALVIN J PHELAN MD
10 CAIRNS
TECUMSEH MICHIGAN 49286

WM P PURFIELD MD
MANCHESTER MI 48158

ELMER C RAABE MD
MORENCI MI 49256

BERT R RICHEY MD
765 MANITOU RD
MANITOU BEACH MICH 49253

SERAFIN L SAMSON MD
160 PARK ST
ADRIAN MI 49221

DONATO F SARAPO MD
MILL ST
ADRIAN MICHIGAN 49221

GORDON SHANNON MD A
BLISSFIELD MI 49228

ELEANOR P SKUFIS MD
201 ORCHARD RD
ADRIAN MICHIGAN 49221

XENOPHON SKUFIS MD
123 E CHESTNUT
ADRIAN MICH 49221

LANDIS C STEWART MD
750 HIGH ST
ADRIAN MICH 49221

RICHARD L TAYLOR MD
2550 N ADRIAN RD
ADRIAN MI 49221

CHAD A VAN DUSEN MD L
ROUTE #2
BLISSFIELD MI 49228

PATRICIA WENTZ MD
760 RIVERSIDE
ADRIAN MICHIGAN 49221

KEITH H WHITEHOUSE MD
MORENCI MI 49256

GEO C WILSON MD
BOX 224
CLINTON MICH 49236

MARVIN B WOLF MD
225 RIVERSIDE AVE
ADRIAN MICH 49221

GEO H WYNN MD
1115 W MAUMEE
ADRIAN MICH 49221

LIVINGSTON

THOS A BARTON MD
116 N MICHIGAN
HOWELL MICH 48843

JOHN H BETHEA MD
12851 E GR RIVER AVE
BRIGHTON MI 48116

NILES A CLARKE MD
616 SPENCER RD
BRIGHTON MICH 48116

RAY M DUFFY MD L
4411 THOMAS ST
HOLLYWOOD FL 33021

KAROL GRANOWSKI MD
MCPHERSON COMM HLT CTR
HOWELL MICHIGAN 48843

NORMAN H HAREBOTTLE MD
209 N WALNUT
LANSING MI 48933

R FRED HAUER MD
FOWLERVILLE MI 48836

JESSE J HENDREN MD R
FOWLERVILLE MI 48836

THOMAS F HIGBY MD
FOWLERVILLE MICHIGAN 48836

HAROLD C HILL MD
116 N MICHIGAN AVE
HOWELL MICH 48843

STANLEY L HOFFMAN MD
1200 BYRON ROAD
HOWELL MICHIGAN 48843

LOUIS E MAY MD
CITY ROUTE 4
HOWELL MICH 48843

FLORENCE J C PERRY MD
1161 FOX HILLS DR
HOWELL MI 48843

R W PHILLIPS MD
HAMBURG MICHIGAN 48139

PHILLIP E SCHMITT MD
515 SO TOMPKINS
HOWELL MI 48843

LUKE H C SHENG MD
111 W GRAND RIVER AVE
BRIGHTON MI 48116

ROSCOE V STUBER MD
1200 BYRON RD
HOWELL MICHIGAN 48843

ENOS G WALKER MD L
4485 CORDLEY LAKE
LAKELAND MICH 48143

STELLA K C WANG MD
111 GRAND RIVER
BRIGHTON MICHIGAN 48116

EDWIN S WOODWORTH MD
1200 BYRON RD
HOWELL MICHIGAN 48843

LUCE

DONALD K BARSTOW MD
ENGADINE MI 49827

EDWARD C DALE MD
BOX 9
NEWBERRY MI 49868

ROBERT D GIBSON MD
804 NEWBERRY AVE
NEWBERRY MI 49868

ROBERT E GIBSON MD
207 W JOHN ST
NEWBERRY MICH 49868

R P HICKS MD
210 W JOHN ST
NEWBERRY MICH 49868

B G KEIZER MD
NEWBERRY STATE HOSP
NEWBERRY MICHIGAN 49868

WM R PURMORT JR MD
NEWBERRY STATE HOSP
NEWBERRY MICH 49868

THOS W THOMPSON MD L
ROUTE 2 BOX 691M
TRAVERSE CITY 49684

MACOMB

JUAN E ALEJOS MD
27643 SCHOENHERR
WARREN MI 48093

JAMES H ALEXANDER MD
25815 HARPER
ST CLAIR SHORES MI 48081

MERCEDES ALVAREZ MD
28532 SCHOENHERR RD
WARREN MI 48093

ROBT H AMBROSE MD
18801 E TEN MILE RD
ROSEVILLE MICH 48066

MIGUEL A ARELLANO MD
21500 MOUND RD
WARREN MICHIGAN 48091

F E AUDRETSCH MD
355 LINCOLN
GROSSE PTE MI 48230

FRED AVERBUCH MAJ MC A
USAF HOSP APO
SAN FRANCISCO CA 96323

OPHELIA P BAKER MD
8783 BRUCE COLLINS CT
STERLING HEIGHTS MI 48077

JOHN G BARKER MD
8050 WARREN BLVD
CENTER LINE MICH 48015

ALVIN J BEECHER M D
21501 KELLY
EAST DETROIT MICH 48021

BERNARD BIGLEY MD
35992 GRATIOT
MT CLEMENS MICHIGAN 48043

FRANK J BILUK MD
GM TECH CENTER
12 MILE & MOUND RD

WARREN MICH 48090

YOUSEF B BISHAI MD
28043 HOOVER
WARREN MICHIGAN 48093

DONALD G BLAIN MD
198 S GRATIOT
MT CLEMENS MI 48043

FRANKLYN F BOND MD
4861 E NINE MILE RD
WARREN MICHIGAN 48091

LELAND C BROWN MD
21536 PARKWAY
ST CLAIR SHORES MICH 48082

G C BRUECKNER MD
ST JOSEPH HOSPITAL
MT CLEMENS MI 48043

JAMES W BRYCE MD
24735 VAN DYKE
CENTERLINE MI 48015

CARLOS J BULCOURF MD
31170 HOOVER RD
WARREN MI 48093

W B CARRUTHERS MD
198 S GRATIOT
MT CLEMENS MI 48043

GEORGE CHABATOR MD
7643 COVE TERRACE
SARASOTA FL 33581

HAROLD P CHARBENEAU MD
229 S GRATIOT
MT CLEMENS MICH 48043

LUIS M CHARBONIER MD
28532 SCHOENHERR
WARREN MICHIGAN 48093

JOEL W CLAY MD
263 S GRATIOT AVE
MT CLEMENS MICHIGAN 48043

ALAN COHEN MD
12500 TWELVE MILE RD
WARREN MICHIGAN 48093

ALBERTO COHEN MD
25705 STONEYCROFT DR
SOUTHFIELD MICHIGAN 48075

SORAB A COLAH MD
708 MONITOR LEADER BL
MT CLEMENS MICHIGAN 48043

CELAL COLAKOGLU MD
46056 CASS
UTICA MI 48087

DAVID COLLON DDS A
MACOMB DAILY BLDG
MT CLEMENS MI 48043

JOHN CORBETT MD
225 S GRATIOT
MT CLEMENS MICHIGAN 48043

JOSE COSIO MD
ST JOSEPH HOSPITAL
MT CLEMENS MICH 48043

JOS M CROMAN JR MD R
131 MARKET ST
MT CLEMENS MI 48043

VICTOR CURATOLO MD
67 CASS AVE
MOUNT CLEMENS MICH 48043

BERNARDO M DANAN MD
28043 HOOVER RD
WARREN MI 48093

H B DARIAN MD
11528 E 12 MILE RD
WARREN MICHIGAN 48093

E DEOCAMPO MD
20720 MAXINE
ST CLAIR SHORES MI 48080

NESTOR D DEOCAMPO MD
28043 HOOVER
WARREN MI 48093

DARIO C DEPAULIS MD
22770 KELLY
EAST DETROIT MICH 48021

POLIBIO A DILONE MD
493 W GRAND BLVD
DETROIT MI 48216

PAUL DIONNE MD
8216 E 12 MILE RD
WARREN MI 48093

EDMUND J DUDZINSKI MD
43533 ELIZABETH RD
MT CLEMENS MI 48043

CHARLES M EBNER MD
25520 LITTLE MACK
ST CLAIR SHORES MI 48081

SEYMOUR B EKELMAN MD
14 BELLEVIEW
MT CLEMENS MICHIGAN 48043

ELMER P ELLIAS MD
23700 VAN DYKE
WARREN MICH 48089

JOHN A ENGELS MD
69311 N MAIN
RICHMOND MICH 48062

ARTHUR W ERKFITZ MD L
BATESVILLE RD ROUTE 2
WOODSTOCK GA 30188

JERRY S FAGELMAN MD
1514 HOUNDS CHASE
TROY MI 48084

JAMES WM FINN MD
46056 CASS
UTICA MICHIGAN 48087

LAWRENCE W FRENCH MD
25815 HARPER
ST CLAIR SHORES MI 48081

HERBERT F FRIEDMAN MD
13087 ELEVEN MILE RD
WARREN MI 48093

ANDREW A FULGENZI MD
17301 E EIGHT MILE RD
EAST DETROIT MI 48021

FRANCIS G GARRETT MD
81 LOCHMOOR BLVD
GROSSE PTE SHORES MI 48236

CARLOS B GAYLES MD
122 WASHINGTON
ROMEO MI 48065

MORRIS I GOLDIN MD
6902 CHICAGO RD
WARREN MICH 48092

BERNARD J GOLDMAN MD
243 S GRATIOT AVE
MT CLEMENS MICH 48043

C G GONZALEZ MD
20 PARKVIEW
ST JOSEPH HOSP

MT CLEMENS MI 48043

SEYMOUR V GORDON MD
13500 E 12 MILE RD
WARREN MI 48093

MICHAEL HAAS MD
20867 MACK AVE
GROSSE PTE WDS MI 48236

OTTO H HAHNE MD
8425 E TWELVE MILE RD
WARREN MICHIGAN 48093

WALDEMAR B HARTMANN MD
1416 S GRATIOT
MOUNT CLEMENS MICH 48043

HERBERT M HILLER MD
13500 E TWELVE MILE RD
WARREN MICHIGAN 48093

LEON S HIRZEL MD
33080 GARFIELD
FRASER MICHIGAN 48026

JAMES M HOLBROOK MD
23700 VAN DYKE AVE
WARREN MI 48089

JULIUS HORVATH MD
18847 ROSETTA
EAST DETROIT MICH 48021

A JOSEPH HOSKI MD
8425 E TWELVE MILE RD
WARREN MI 48093

MICHAEL HRANCHOOK MD
30001 VAN DYKE
WARREN MICHIGAN 48093

FRANK J HULL MD
728 CANTERBURY
GROSSE PTE WOODS MI 48236

CLAUDIO M IACOBELLI MD
21811 KELLY RD
EAST DETROIT MI 48021

DANILO H IGLESIAS MD
229 S GRATIOT AVE
MT CLEMENS MI 48043

ERNESTO R IGLESIAS MD
191 NORTH AVE
MT CLEMENS MI 48043

ELI M ISAACS MD
17210 CEDARCROFT PL
SOUTHFIELD MI 48075

EDWARD K ISBEY MD
28495 HOOVER
WARREN MI 48093

ROBERT D ISGUT MD
28477 HOOVER RD
WARREN MI 48093

MANUEL JACOBS MD
23700 VAN DYKE AVE
WARREN MI 48089

JAMES H JEWELL MD
ROSEVILLE THEATRE BLDG
ROSEVILLE MICH 48066

JOHN P KANE MD
67 CASS AVE
MOUNT CLEMENS MICH 48043

PETER V KANE MD
230 NORTH AVE
MOUNT CLEMENS MICH 48043

WM J KANE MD L
171 NORTH AVENUE
MT CLEMENS MI 48043

HAROLD L KATZMAN MD
13500 E 12 MILE RD
WARREN MI 48093

ROBIN S KEY MD
28495 HOOVER RD
WARREN MI 48093

JOYCE W KINGSLEY JR MD
18801 TEN MILE RD
ROSEVILLE MICH 48066

PAUL R KIPP MD
14 BELLEVIEW
MT CLEMENS MICHIGAN 48043

WM B KIRTLAND JR MD
18801 E TEN MILE RD
ROSEVILLE MICHIGAN 48066

ALFRED A KLEIN MD
23700 VAN DYKE
WARREN MICH 48089

K H KNOBLAUCH MD
8425 TWELVE MILE RD E
WARREN MICHIGAN 48093

WM J KOKENY MD
23700 VAN DYKE AVE
WARREN MI 48093

RICHARD M KOMMEL MD
26510 DUNDEE
HUNTINGTON WDS MICH 48070

JOEL M KRIEGEL MD
35992 GRATIOT AVE
MT CLEMENS MI 48043

BRUCE KRIEGER MD
23365 COUNTRY WOODS LN
SOUTHFIELD MI 48075

HARVEY A KRIEGER MD
13500 12 MILE RD E
WARREN MI 48093

MORTON J KRIPKE MD
45420 VAN DYKE
UTICA MICHIGAN 48087

JOSEPH D KROON MD
656WELLINGTON CRESCENT
MT CLEMENS MICHIGAN 48043

HYMAN KURTZ MD
16712 TIMBERVIEW
FRASER MI 48026

GEORGE P KYPROS MD
25520 LITTLE MACK
ST CLAIR SHORES MI 48081

CHARLES LAPP MD
7817 MC CLELLAN
UTICA MICHIGAN 48087

LAWRENCE E LEE MD
8425 E 12 MILE RD
WARREN MICHIGAN 48093

THOMAS E LEE MD
13403 E 13 MILE RD
WARREN MI 48093

CHARLES LEVI MD
8262 E TWELVE MILE RD
WARREN MICHIGAN 48093

SAMUEL A LICATA MD
21349 KELLY RD
EAST DETROIT MI 48021

ONOFRE B LLANEZA MD M
2026 A WERNER PARK
FT CAMPBELL KY 42223

RODOLFO V LOO MD
1664 WITHERBEE
TROY MI 48084

GERALD L LOPEZ MD
37159 CHARTER OAKS BLD
MT CLEMENS MI 48043

RICHARD J LUBERA MD
25520 LITTLE MACK
ST CLAIR SHORES MI 48081

ANDREW J MAGUIRE MD
45569 VAN DYKE
UTICA MICH 48087

EDO V MARCUZ MD
45420 VAN DYKE
UTICA MI 48087

HANSI MARK MD
8236 E 12 MILE RD
WARREN MICHIGAN 48093

WM L MARTIN MD
117 S MAIN ST
ROMEO MICH 48065

MAX W MATTES MD
20280 FOREST WOOD DR
SOUTHFIELD MI 48075

C MATTHEWS JR MD
230 NORTH AVE
MT CLEMENS MICHIGAN 48043

EDWARD S MAXIM M D
225 S GRATIOT
MT CLEMENS MI 48043

MARY L MAYER MD
715 S ROGERS APT 19
MASON MI 48854

JOHN D MC GINTY MD
243 S GRATIOT
MT CLEMENS MICHIGAN 48043

KATHRYN MC MORROW MD
2477 NEW ENGLAND DR
ROCHESTER MI 48063

KRIKOR MERAMETDJIAN MD
22841 VANDYKE
WARREN MI 48089

JULE J MERRITT MD
36640 S GRATIOT AVE
MT CLEMENS MICHIGAN 48043

HAROLD O MESSMER MD
7817 MCCLELLAN
UTICA MICHIGAN 48087

SIDNEY S MEYERS MD
28477 HOOVER
WARREN MICHIGAN 48093

GEORGE W MILLER MD
18815 E TEN MILE RD
ROSEVILLE MI 48066

SIDNEY S MILLER MD
28477 HOOVER RD
WARREN MICHIGAN 48093

EARL G MOEHN MD
480 NOTRE DAME
GROSSE POINTE MI 48230

GEO F MOORE MD L
69434 N FOREST
RICHMOND MI 48062

GERALD W MORRIS MD
14 BELLEVIEW
MT CLEMENS MICHIGAN 48043

PHILIP T MULLIGAN MD
612 MONITOR LEADER BL
MOUNT CLEMENS MICH 48043

ATALAY M MURGUZ MD
26451 RYAN RD
WARREN MI 48091

HELEN M NUTTING MD
22631 GREATER MACK
ST CLAIR SHORES MI 48080

VINCENT R O SHEE MD
8216 E TWELVE MILE RD
WARREN MI 48093

ORVILLE OUGHTRED MD
26401 HARPER
ST CLAIR SHORES MI 48081

MARC PACHO MD
32397 DESMOND DR
WARREN MI 48093

DELMO A PARIS MD
18801 E TEN MILE RD
ROSEVILLE MICH 48066

N H PARMELEE MD
50551 VAN DYKE AVE
UTICA MICHIGAN 48087

LEO PARNAGIAN MD
230 NORTH AVE
MT CLEMENS MI 48043

GILBERT PENA MD
31637 PAGELS DRIVE
WARREN MI 48092

FLORENCE PEREZ MD
32397 DESMOND DR
WARREN MI 48093

ANTHONY C PORRETTA MD
423 NORTH SHORE DR
ST CLAIR SHORES MI 48080

FRANK J PUGLIESI MD
21811 KELLY RD
EAST DETROIT MI 48021

MOUFID RAGHEB MD
705 N VALLEY CHASE RD
BLOOMFIELD HILLS MI 48013

GERALD RAKOTZ MD
13087 ELEVEN MILE RD
WARREN MICHIGAN 48093

ANTONIO E RAMOS MD
29846 SCHOENHERR
WARREN MICHIGAN 48093

RUFUS H REITZEL MD
199 S GRATIOT AVE
MOUNT CLEMENS MICH 48043

JOS O REVERE MD
192 S GRATIOT AVE
MOUNT CLEMENS MICH 48043

CHARLES B RIDDLE MD
620 EASTLAND PROF BLD
HARPER WOODS MI 48236

E A RINKENBERGER MD
243 S GRATIOT AVE
MT CLEMENS MICH 48043

JOS RIVKIN MD
14 BELLEVIEW
MOUNT CLEMENS MICH 48043

GEO E ROTH MD
19136 MENDOTA AVE
DETROIT MI 48221

ARTHUR M ROTHMAN MD
22422 GRATIOT AVE
EAST DETROIT MICH 48021

RONALD E ROURKE MD
14628 E 7 MILE RD
DETROIT MI 48205

DANIEL L ROUSSEAU MD
MONITOR LEADER BLDG
MT CLEMENS MICHIGAN 48043

WM E RUSH MD
ST JOHNS HOSP
DETROIT MI 48236

PAUL RUSSELL MD
198 S GRATIOT
MT CLEMENS MI 48043

JACK RYAN MD
23700 VAN DYKE AVE
WARREN MICH 48089

THOMAS E RYAN MD
39310 GARY AVE
MT CLEMENS MICHIGAN 48043

RONALD J SABLES MD
225 S GRATIOT AVE
MT CLEMENS MI 48043

RUSSELL F SALOT MD
230 NORTH AVE
MOUNT CLEMENS MICH 48043

CARL J SARNACKI MD
8425 TWELVE MILE RD E
WARREN MICHIGAN 48093

HOWARD J SAWYER MD
11177 E 8 MILE RD
WARREN MI 48089

JOS N SCHER MD
130 CASS AVE
MOUNT CLEMENS MICH 48043

SYDNEY SCHER MD
132 CASS AVE
MOUNT CLEMENS MICH 48043

ROBERT F SCHMUNK MD
136 CASS AVENUE
MT CLEMENS MICHIGAN 48043

MAHMOUD M SELIM MD
8425 E 12 MILE RD
WARREN MI 48093

THOMAS J SETTER MD
319 N GRATIOT AVE
MT CLEMENS MI 48043

YEHYA A SHAWKY MD
8425 E TWELVE MILE RD
WARREN MICHIGAN 48093

EZRA S SHAYA MD
31170 HOOVER
WARREN MICHIGAN 48093

LAWRENCE F SHEPPARD MD
23700 VAN DYKE AVE
WARREN MI 48089

HERBERT D SHERBIN MD
12500 TWELVE MILE RD
WARREN MICHIGAN 48093

GERALD SHERMAN MD
12500 12 MILE RD
WARREN MI 48093

EDWARD G SIEGFRIED MD
229 S GRATIOT AVE
MT CLEMENS MICH 48043

M P SILVERMAN MD
28477 HOOVER RD
WARREN MI 48093

MILTON F SIMMONS MD
12500 E TWELVE MILE RD
WARREN MICHIGAN 48093

WM N SIMS MD
229 S GRATIOT
MOUNT CLEMENS MICH 48043

NELSON SINGER MD
22100 GRATIOT AVE
EAST DETROIT MICH 48021

JAMES B STANTON MD
319 N GRATIOT AVE
MT CLEMENS MICH 48043

WM A STARBIRD MD
8216 E 12 MILE RD
WARREN MICH 48093

MORRIS STARKMAN MD
28477 HOOVER
WARREN MICHIGAN 48093

GEORGE H STEELE MD
229 S GRATIOT
MT CLEMENS MICHIGAN 48043

EUGENE STEINBERGER MD
23700 VAN DYKE
WARREN MI 48089

CARMELA M STELLA MD
191 NORTH AVE
MT CLEMENS MI 48043

JOSEPH E STEPKA M D
50551 VAN DYKE
UTICA MI 48087

KIRWIN STIEF MD
218 N CHRISTINE CIRCLE
MT CLEMENS MI 48043

JULIUS STONE MD
198 S GRATIOT
MT CLEMENS MI 48043

CHARLES STOYKA MD
21420 HARPER
ST CLAIR SHORES MI 48080

DONALD E STROUD DDS A
8425 TWELVE MILE RD
WARREN MI 48093

OSCAR D STRYKER MD L
38422 HIDDEN LANE
MT CLEMENS MI 48043

FREDK A STURM MD
76 LOCHMOOR
GROSSE PTE MI 48236

ADOLPH W SUKSTA MD
23350 GRATIOT
EAST DETROIT MICH 48021

M SUZUKI M D
23700 VAN DYKE
WARREN MICH 48089

ALFRED A THOMPSON MD
126 CASS AVE
MOUNT CLEMENS MICH 48043

L LEO TINKEY MD
520 COBB ST
CADILLAC MI 49601

BERNARD L TOFT MD
20927 KELLY RD
E DETROIT MI 48021

DAVID TRANSUE MD
13403 E 13 MILE RD
WARREN MI 48093

KENNETH F TUCKER MD
23700 VAN DYKE
WARREN MI 48089

WILLIAM URBANCIC MD
22048 GRATIOT
EAST DETROIT MI 48021

RAMON A URENA MD
38028 ROCK HILL RD
MT CLEMENS MI 48043

LACEY WALKE MD
214 DAV WHITNEY BLDG
DETROIT MI 48226

FREDRIC WATTS MD
27440 HOOVER RD
WARREN MI 48093

K A WEINBERGER MD
27643 SCHOENHERR RD
WARREN MI 48093

CHAS J WEINGARTEN MD
12500 E 12 MILE RD
WARREN MI 48093

JACK I WEISS MD
23700 VAN DYKE AVE
WARREN MICH 48089

ALEC WHITLEY MD
21707 ERBEN DR
ST CLAIR SHORES MI 48081

MAURICE M WILDE MD L
5930 CHICAGO
WARREN MICH 48092

NORMAN R WILSON MD
225 S GRATIOT AVE
MT CLEMENS MICHIGAN 48043

CARL WITUS MD
21349 KELLY RD
EAST DETROIT MICH 48021

ERVIN WOLF MD
ROSEVILLE THEATRE BLDG
ROSEVILLE MI 48066

WM C WYTE MD
263 S GRATIOT AVE
MT CLEMENS MICHIGAN 48043

KEN YAMASAKI MD
23700 VAN DYKE
WARREN MICH 48089

DAN ZAVELA MD
679 N RENAUD
GROSSE PTE WDS MICH 48236

ROBERT A ZINK MD
25815 HARPER AVE
ST CLAIR SHORES MI 48081

MR GILBERT E ZOOK A
253 S GRATIOT
MT CLEMENS MI 48043

ALEX ZOTOVAS MD
23700 VAN DYKE AVE
WARREN MI 48089

MANISTEE

LE ROY A FUTTERER MD
FOREST CLINIC BLDG
MANISTEE MICH 49660

ROBT R GARNEAU MD
FOREST CLINIC BLDG
MANISTEE MICH 49660

ERNEST C HANSEN MD
326 FIRST ST
MANISTEE MICH 49660

KARL K KELLAWAN MD
490 FOURTH ST
MANISTEE MI 49660

ROMAN R KNOBLICH MD
WEST SHORE HOSPITAL
MANISTEE MI 49660

JOHN F KONOPA MD
57 POPLAR ST
MANISTEE MICH 49660

ERNEST B MILLER MD R
326 FIRST ST
MANISTEE MICH 49660

RICHARD L NOVACK MD
ONEKAMA MI 49675

ROGER PATERSON MD
310 9TH ST
MANISTEE MI 49660

HOMER A RAMSDELL MD L
398 RIVER ST
MANISTEE MI 49660

K G ROSENOW MD
FOREST CLINIC BLDG
MANISTEE MICH 49660

DONALD N SCHWING MD
FOREST CLINIC BLDG
MANISTEE MICH 49660

DAVID A WILD MD
84 CYPRESS ST
MANISTEE MI 49660

MARQUETTE-ALGER

JAMES R ACOCKS MD
MORGAN HEIGHTS
MARQUETTE MICH 49855

ARTHUR L AMOLSCH MD L
1008 BLUFF ST
MARQUETTE MICHIGAN 49855

MATTHEW C BENNETT MD
1414 W FAIR AVENUE
MARQUETTE MICH 49855

ROBT F BERRY MD
1414 W FAIR AVENUE
MARQUETTE MI 49855

JOS P BERTUCCI MD
114 S FIRST ST
ISHPEMING MICH 49849

THOS B BOLITHO MD
1414 W FAIR AVENUE
MARQUETTE MICHIGAN 49855

ADAM BRISH MD
1414 W FAIR AVE
MARQUETTE MI 49855

RANKIN L CAREFOOT MD
1414 W FAIR AVENUE
MARQUETTE MICHIGAN 49855

WILBUR L CASLER MD L
131 E RIDGE ST
MARQUETTE MI 49855

LUCIANO CELORI MD
427 W COLLEGE
MARQUETTE MI 49855

DONAL T CONLEY MD
1414 W FAIR AVENUE
MARQUETTE MICHIGAN 49855

MOSES COOPERSTOCK MD
1414 W FAIR AVE
MARQUETTE MICH 49855

WM A CORCORAN MD L
168 DAVIS ST
ISHPEMING MI 49849

MICHAEL COYNE MD
1414 W FAIR AVE
MARQUETTE MI 49855

DONALD R ELZINGA MD
1414 W FAIR AVE
MARQUETTE MI 49855

EUGENE R ELZINGA MD
1414 W FAIR AVENUE
MARQUETTE MICH 49855

FIROOZ EMAMI MD
1414 W FAIR AVE
MARQUETTE MI 49855

JOHN W ENGLISH MD
1414 W FAIR AVENUE
MARQUETTE MICHIGAN 49855

R FLORES MD
613 LAKE ST
MARQUETTE MI 49855

S N GERVAE MD
1101 SIGSBEE
HANCOCK MI 49930

SOUTHGATE J GREEN MD
GWINN MICHIGAN 49843

WILLIAM F HOPKINS MD
1414 W FAIR AVENUE
MARQUETTE MICHIGAN 49855

DANL P HORNBOGEN MD
1414 W FAIR AVENUE
MARQUETTE MICHIGAN 49855

LLOYD W HOWE MD L
453 E MICHIGAN
MARQUETTE MI 49855

ELSTON R HUFFMAN MD
1414 W FAIR AVENUE
MARQUETTE MICHIGAN 49855

WILLIAM C HUMPHREY MD
829 CROIX STREET
NEGAUNEE MICHIGAN 49866

ROBT G JAEDECKE MD
829 CROIX
NEGAUNEE MICH 49866

ELIZABETH D KANE MD R
418 W MAGNETIC
MARQUETTE MI 49855

HARRY KOENIG MD
540 E DIVISION ST
ISHPEMING MI 49849

E F KRONSCHNABEL MD
1414 W FAIR AVENUE
MARQUETTE MICH 49855

JOHN C KUBLIN MD
1414 W FAIR AVE
MARQUETTE MI 49855

WARREN C LAMBERT MD
347 E RIDGE ST
MARQUETTE MI 49855

M J LEXMOND MD
524 MATHER AVE
ISHPEMING MICHIGAN 49849

E T LINCKE MD
1414 W FAIR AVENUE
MARQUETTE MICHIGAN 49855

BARBARA E LYONS MD
NORTHERN MICH UNIV
STUDENT HLTH CTR
MARQUETTE MI 49855

JAMES W LYONS MD
1414 W FAIR AVE
MARQUETTE MICH 49855

NORMAN L MATTHEWS MD
N MICH CHILD CLINIC
MARQUETTE MICH 49855

THOMAS J MUDGE MD
1414 W FAIR AVENUE
MARQUETTE MI 49855

ARCHIE S NAROTZKY MD
MIRACLE CIRCLE
ISHPEMING MICH 49849

R WILLIAM NEUMANN MD
1414 W FAIR AVE
MARQUETTE MI 49855

WILSON G NEWELL MD
101 S FOURTH
ISHPEMING MI 49849

OSMO NIEMI MD R
BOX 151
GWINN MI 49843

EARLE S OLDHAM MD
427 W COLLEGE AVE
MARQUETTE MI 49855

HUSCHANG M PAYAN MD
BELL MEMORIAL HOSP
ISHPEMING MI 49849

WALLACE G PEARSON MD
1414 W FAIR AVENUE
MARQUETTE MICHIGAN 49855

PHILLIP E PERKINS MD
16150 CARRIAGE LAMP DR
SOUTHFIELD MI 48075

FLORENCE A PILLOTE MD
26 LAKEVIEW DR
MARQUETTE MICHIGAN 49855

JOHN F PILLOTE MD
1414 W FAIR AVENUE
MARQUETTE MICHIGAN 49855

RICHARD POTTER MD
P O BOX 790
MARQUETTE MI 49855

LOUIS ROSENBAUM MD
524 MATHER ST
ISHPEMING MICH 49849

FREDK C SABIN MD
1414 W FAIR AVENUE
MARQUETTE MICH 49855

W GENE SCHROEDER MD
524 MATHER ST
ISHPEMING MI 49849

SARA K D SCHWEINSBERG A
COUNTY RD 492
MARQUETTE MI 49855

MILTON SODERBERG MD
1414 W FAIR AVE
MARQUETTE MI 49855

JAMES F TOBIN JR MD
724 ELLIOTT AVE
ISHPEMING MICHIGAN 49849

DAVID R WALL MD
ALTAMONT & FISHER
MARQUETTE MICHIGAN 49855

ROBERT B WHITE MD
1503 CENTER ST
MARQUETTE MI 49855

REGINALD G WILLIAMS MD
524 MATHER ST
ISHPEMING MICH 49849

GEORGE M WILSON JR MD
1414 W FAIR AVENUE
MARQUETTE MICHIGAN 49855

KENNETH C WRIGHT M D
1414 W FAIR AVENUE
MARQUETTE MICH 49855

MASON

HERBERT G BACON JR MD
101 N MAIN
SCOTTVILLE MICH 49454

A FLOYD BOON MD
203 N FERRY
LUDINGTON MICH 49431

JOHN R CARNEY MD
202 N PARK ST
LUDINGTON MICH 49431

RUTH V C CARNEY MD
202 N PARK AVE
LUDINGTON MICH 49431

R J CASTELLANI MD
PO BOX 349
LUDINGTON MICH 49431

HARRY L CLARK MD L
619 N LAKESHORE DR
LUDINGTON MI 49431

AUSTIN CRAYMER MD
420 N RATH
LUDINGTON MICH 49431

F E ERLANDSON MD
121 E LUDINGTON AVE
LUDINGTON MI 49431

R L EWING MD
600 TINKHAM AVE
LUDINGTON MICHIGAN 49431

ROBERT IRICK MD
MEMORIAL HOSPITAL
LUDINGTON MI 49431

GLADYS J KLEINSCHMIDT
100 W BUTTERFIELD RD
OAK BROOK ILLINOIS 60521

WM S MARTIN MD
107 LUDINGTON
LUDINGTON MICH 49431

GERRY MAYER MD
806 RUSSELL
LUDINGTON MI 49431

ROBT A OSTRANDER MD R
5000 E GRANT RD #5
TUCSON AZ 85716

CHAS A PAUKSTIS MD
111 E COURT ST
LUDINGTON MICH 49431

JOHN RAMSEY MD
902 E LUDINGTON AVE
LUDINGTON MI 49431

WM F SUTTER MD
220 S JAMES ST
LUDINGTON MICH 49431

GIRARD VEENSCHOTEN MD
380 SOUTH ST
BALDWIN MI 49304

JAMES E WAUN MD
506 E LUDINGTON
LUDINGTON MI 49431

MECOSTA-OSCEOLA-LAKE

CHARLES M ASPLUND MD
213 ELM ST
BIG RAPDIS MI 49307

FRED F BIRKAM MD
7301 SCHAEFER RD
DEARBORN MI 48126

JACOB BRUGGEMA MD
MAIN ST
EVART MICH 49631

ROY A DAVIS MD
FERRIS STATE COLLEGE
BIG RAPIDS MI 49307

JACK HALDEMAN MD
1014 S STATE ST
BIG RAPIDS MICH 49307

LELAND A HICKOX MD
1014 S STATE ST
BIG RAPIDS MICH 49307

PAUL B KILMER MD
102 W UPTON
REED CITY MI 49677

EDWARD H KOWALESKI MD

REMUS MI 49340

NORMAN V LINCOLN MD
108 E UPTON
REED CITY MI 49677

FRANK A MERLO MD
206 S MICHIGAN ST
BIG RAPIDS MICH 49307

HARRY MOHAMMED MD
FERRIS STATE COLLEGE
BIG RAPIDS MI 49307

WM W MOON MD
BOX 175
BALDWIN MI 49304

LORENZO R NELSON MD
R F D 1
BALDWIN MICH 49304

LELAND B PHELPS MD
111 S CHESTNUT ST
REED CITY MI 49677

GEORGE B PUSCZAK MD
213 ELM ST
BIG RAPIDS MI 49307

JAMES L TYSON MD
1014 SOUTH STATE ST
BIG RAPIDS MICH 49307

EDWARD W VAN AUKEN MD
229 S WARREN
BIG RAPIDS MICH 49307

JAMES E WALTERS MD
1014 S STATE ST
BIG RAPIDS MICH 49307

MENOMINEE

NILS D AGNEBERG MD
531 1ST ST
MENOMINEE MICH 49858

HERMAN R BRUKARDT MD
534 FIRST ST
MENOMINEE MICH 49858

RICHARD D CHALTRY DO

STEPHENSON MI 49887

FRANCIS J DEWANE MD
413 10TH AVE
MENOMINEE MICH 49858

L GRANT GLICKMAN MD L
958 FIRST ST
MENOMINEE MICH 49858

JOHN R HEIDENREICH MD

DAGGETT MI 49821

PATRICIA C HOPSON MD A
18285 BIRCHCREST
DETROIT MI 48221

WM S JONES MD L
1146 TENTH AVE
MENOMINEE MI 49858

WM S JONES JR MD
1146 10TH AVE
MENOMINEE MICH 49858

KARM C KERWELL MD L
P O BOX 17
STEPHENSON MI 49887

BENEDICT M POLCYN MD
205 FIRST ST
MENOMINEE MI 49858

NORTH CENTRAL

THOMAS A BAKER MD A
8783 BRUCE COLLINS CT
STERLING HEIGHTS MI 48077

VERNON B BLAHA MD

GRAYLING MICH 49738

JOHN D BOEHM MD R
STATE HOSPITAL
TRAVERSE CITY MI 49684

W E BONTRAGER MD

MIO MICHIGAN 48647

DONALD D BURKLEY MD
P O BOX 428
GRAYLING MI 49738

C E CHRISTENSEN MD
N MICH TB SAN
GAYLORD MICH 49735

WILLIS L CHRISTENSEN
617 NORTH COURT
GAYLORD MI 49735

C G CLIPPERT M D R
504 PLUM ST
GRAYLING MI 49738

KEITH D COULTER MD R
1150 TARPON CENTER DR
THE TOWERS-APT #703

VENICE FL 33595

CLARE H CRANDELL MD R

WEST BRANCH MI 48661

PAUL DOSCH MD

GRAYLING MICH 49738

KONRAD A GARSTKA MD
130 CARPENTER ST
WEST BRANCH MI 48661

BERNARD GODFROY MD

ROSCOMMON MICHIGAN 48653

HERMAN J HEINEMANN MD
126 E MAIN
GAYLORD MI 49735

BENJ E HENIG M D

GRAYLING MI 49738

THOS W HOWARTH MD

GLADWIN MI 48624

HUGH M JARDINE M D

WEST BRANCH MI 48661

GEORGE E KIELER MD

ROSCOMMON MICH 48653

ROBERT S LIBKE M D

GAYLORD MI 49735

RICHARD E OLSEN MD

LUZERNE MI 48636

CHARLES L OPPY M D

ROSCOMMON MI 48653

R D RUSAK MD

GLADWIN MICHIGAN 48624

GEO L SCHAIBERGER MD

WEST BRANCH MI 48661

S SRINIVASAN MD
500 W CEDAR AVE
GLADWIN MI 48624

STANLEY A STEALY MD L

GRAYLING MI 49738

HAROLD A TIMRECK MD

GLADWIN MI 48624

RUSTICO C TONGCO MD
617 N COURT ST
GAYLORD MI 49735

HOWARD E VAN OOSTEN MD
117 BURGESS
WEST BRANCH MICH 48661

LLOYD T WIEGERINK MD

WEST BRANCH MICH 48661

MIDLAND

ADELTO ADAN MD
3103 WASHINGTON
MIDLAND MI 48640

ARTHUR R BASEL MD
901 CRESCENT
MIDLAND MI 48640

MAC B BENJAMIN MD
307 CASS ST
SANFORD MICHIGAN 48657

DONALD R BENNETT MD
3902 APPLEWOOD
MIDLAND MI 48640

J F BLACKHURST M D
2715 ASHMAN STREET
MIDLAND MICH 48640

ROBT T BLACKHURST MD
233 E LARKIN
MIDLAND MICH 48640

ROBT E BOWSHER MD
4005 ORCHARD DR
MIDLAND MICHIGAN 48640

ROBT G BRIDGE MD
2715 ASHMAN
MIDLAND MICH 48640

DAN J BULMER MD
2707 ASHMAN ST
MIDLAND MICH 48640

RAYMOND C BUSH MD
808 W SUGNET
MIDLAND MICHIGAN 48640

J DANIEL CLINE MD
920 W SUGNET
MIDLAND MI 48640

JAMES A DEVLIN MD
115 JEROME
MIDLAND MICH 48640

DALE J DUCOMMUN MD
P O BOX 1693 MED DEPT
MIDLAND MI 48640

DENNIS G EGNATZ MD
312 E MAIN ST
MIDLAND MI 48640

RUTH ELLIS M D
2510 ASHMAN
MIDLAND MICHIGAN 48640

DOZIER N FIELDS JR MD
515 W MAIN ST
MIDLAND MICH 48640

HAROLD H GAY MD R
4689 RUHLE RD
COLEMAN MI 48618

PETER C GAY MD
P O BOX 1693 MED DEPT
MIDLAND MI 48640

ROY M GOETHE MD
222 N SAGINAW RD
MIDLAND MI 48640

HAROLD L GORDON MD
DOW CHEMICAL CO
MIDLAND MICH 48640

ROBERT GRANT MD
2931 MANOR DR
MIDLAND MICHIGAN 48640

NORMAN C GREWE MD
501 E PINE ST
MIDLAND MICHIGAN 48640

EDW P GUNDERSON JR MD
2000 DILLOWAY DR
MIDLAND MI 48640

COLLEEN HABERSTROH MD
3710 APPLEWOOD
MIDLAND MICHIGAN 48640

WILLIAM E HARRIGAN MD
110 W SUGNET
MIDLAND MICHIGAN 48640

C D HEFFERNAN MD
402 DARTMOUTH
MIDLAND MICH 48640

WM A HIMMELSBACH MD
5411 STURGEON CRK PKWY
MIDLAND MI 48640

BENJ B HOLDER MD
P O BOX 1693 MED DEPT
MIDLAND MICH 48640

FREDERICK R HOLLAND MD
1801 RAPANOS
MIDLAND MI 48640

IRVIN M HOWE MD
110 W SUGNET
MIDLAND MICH 48640

RICHARD H HOWELL MD
2707 ASHMAN ST
MIDLAND MI 48640

MARTIN J ITTNER MD
217 N SAGINAW RD
MIDLAND MICH 48640

DAVID B JOHNS MD
P O BOX 1693 MED DEPT
MIDLAND MI 48640

YAHYA KIYAK MD
206 GRAHAM
MIDLAND MI 48640

CHAS G KRAMER MD
BOX 469 DOW CHEMICAL
MIDLAND MICHIGAN 48640

HAROLD A KWAST MD
2715 ASHMAN
MIDLAND MICHIGAN 48640

LINFERD G LINABERY MD
3808 NOTTINGHAM TERR
MIDLAND MI 48640

KARL W LINSENMANN MD
2604 MANOR DR
MIDLAND MICHIGAN 48640

V A MARKS MD
2706 LOUANNA
MIDLAND MICHIGAN 48640

WM A MAYNARD MD R
3862 N W RIVER RD
SANFORD MICHIGAN 48657

EDWARD H MEISEL JR MD
MASONIC BLDG
MIDLAND MICH 48640

MICHAEL P MESAROS MD
222 N SAGINAW RD
MIDLAND MICHIGAN 48640

G FREDK MOENCH MD R
147 CENTER ST
SANFORD MICHIGAN 48657

RICHARD MOULTON MD
115 JEROME ST
MIDLAND MI 48640

GURDON R PATTON MD
2707 ASHMAN
MIDLAND MI 48640

MELVIN H PIKE MD
224 E LARKIN
MIDLAND MICH 48640

ROBERT W POLLOCK MD
2707 ASHMAN ST
MIDLAND MICH 48640

LEONARD A POZNAK MD
4005 ORCHARD DR
MIDLAND MICH 48640

STEPHEN H RANDOLPH MD
201 E ELLSWORTH ST
MIDLAND MICHIGAN 48640

WILLIAM B REDMON MD
115 JEROME
MIDLAND MICHIGAN 48640

JAMES REIF MD
222 N SAGINAW RD
MIDLAND MI 48640

THOMAS E RUSH MD
115 JEROME ST
MIDLAND MI 48640

CHARLES A SANISLOW MD
2707 ASHMAN ST
MIDLAND MICHIGAN 48640

FORREST SCHARF MD
AULTMAN HOSPITAL
2600 6TH ST SW
CANTON OHIO 44710

H C SCHARNWEBER MD
P O BOX 1693 MED DEPT
MIDLAND MICHIGAN 48640

CHARLES A SCHOFF MD
5209 SUNSET DRIVE
MIDLAND MI 48640

ANTON SCHWARZ MD
1006 STERLING DR
MIDLAND MI 48640

JOHN W SHRINER MD
222 N SAGINAW RD
MIDLAND MICH 48640

DONALD S SMITH JR MD
2715 ASHMAN
MIDLAND MI 48640

SIDNEY N SMOCK MD
ROUTE #5
MIDLAND MI 48640

WILBUR D TOWSLEY MD
515 W MAIN ST
MIDLAND MICH 48640

GEORGE ULMER M D
4005 ORCHARD
MIDLAND MICH 48640

ROBERT L VANSICKLE MD
222 N SAGINAW RD
MIDLAND MI 48640

RICHARD W WELK MD
5107 BARTO ST
MIDLAND MI 48640

HARRY O WESTPHAL MD
910 EASTLAWN
MIDLAND MI 48640

CHAS H WILLISON MD
122 TOWNSEND ST
MIDLAND MICH 48640

G JAMES YOBST MD
2719 ASHMAN
MIDLAND MICHIGAN 48640

MONROE

FLORENCE D AMES MD L
2 W NOBLE AVE
MONROE MI 48161

C D BARRETT SR MD L
2133 HOLLYWOOD DR
MONROE MI 48161

ANTHONY H BARTOLO MD
757 N MONROE
MONROE MI 48161

CHARLES E BLACK MD
721 N MACOMB ST
MONROE MICHIGAN 48161

LEONARD C BLAKEY MD L
745 N MONROE ST
MONROE MICHIGAN 48161

WM W BOND MD L
222 N MONROE
MONROE MICH 48161

J J BURROUGHS MD
745 N MONROE ST
MONROE MICHIGAN 48161

ZOLTAN B CIGANY MD
CARLETON MI 48117

BRUCE CLARK MD
8308 LEWIS AVE
TEMPERANCE MICHIGAN 48182

FRANK COSTA MD
21941 WOODRUFF
ROCKWOOD MI 48173

GEORGE Z DIEHL MD
721 N MACOMB
MONROE MICHIGAN 48161

JOY O S DIEHL MD
15463 S MONROE
MONROE MICHIGAN 48161

DALE W DOUGLAS MD
124 COLE RD
MONROE MICH 48161

ROBT T EWING MD L
201 N MACOMB
MONROE MI 48161

JOHN P FLANDERS MD R
5347 QUESTA TIERRA DR
PHOENIX ARIZ 85012

REGINALD A FRARY MD L
CTRY CLUB MOBILE MAN
HWY 19 TROUT LK
EUSTIS FLORIDA 32726

JOHN W FREUD MD
1262 N MACOMB ST
MONROE MICH 48161

HILDA M HENSEL MD
12 E 4TH ST
MONROE MICH 48161

NIKOLAS HNATCZUK MD
8078 SUMMERFIELD
LAMBERTVILLE MICH 48144

FRANCIS IVANICHEK MD
29 WASHINGTON ST
MONROE MI 48161

A ESTHER JOHNSON MD
751 N MONROE ST
MONROE MICHIGAN 48161

S NEWTON KELSO JR MD
116 COLE RD
MONROE MICHIGAN 48161

JOHN R KING MD
12 EAST 4TH ST
MONROE MICHIGAN 48161

EDWARD W LABOE MD R
424 HOLLYWOOD
MONROE MI 48161

GERALD P LAMMERS MD
IDA MI 48140

JOSEPH LIBRES MD
721 N MACOMB ST
MONROE MI 48161

WARREN J LIEDEL MD
136 COLE RD
MONROE MICHIGAN 48161

EDGAR C LONG MD R
P O BOX 1120
SEDONA ARIZONA 86336

WILLIAM F LUSHER MD
8308 LEWIS AVENUE
TEMPERANCE MICHIGAN 48182

REGINALD W MC GEOCH MD L
718 N MACOMB ST
MONROE MI 48161

AMIR H MEHREGAN MD
12 E FOURTH ST
MONROE MI 48161

WALTER A MEIER MD
134 COLE RD
MONROE MICHIGAN 48161

W S MIDDLETON MD
219 W FRONT STREET
MONROE MICH 48161

JIMMY MISTRY MD
MERCY HOSPITAL
MONROE MI 48161

WALTER L MOLESKI MD
134 COLE RD
MONROE MI 48161

MEHMET N OZDAGLAR MD
721 N MACOMB
MONROE MICHIGAN 48161

EMILIO PENA MD
424 MONROE ST
DUNDEE MICHIGAN 48131

HERMANN K B PINKUS MD
415 S MONROE
MONROE MICH 48161

JULIO C POSTIGO MD
721 N MACOMB
MONROE MI 48161

ALBERT H REISIG MD
1 S MONROE ST
MONROE MICH 48161

BERNARD SISMAN MD
130 COLE RD
MONROE MICHIGAN 48161

THOMAS H SNIDER MD
204 W ELM AVE
MONROE MI 48161

ROBT G STREICHER MD
729 N MONROE ST
MONROE MICH 48161

LEDYARD H TOMLINSON MD
8718 MAIN ST
NEWPORT MICHIGAN 48166

SPENCER H WAGAR MD
31 WASHINGTON ST
MONROE MICHIGAN 48161

VERNON L WEEKS MD
749 N MONROE ST
MONROE MI 48161

ROLLAND W WILKINS MD
118 COLE RD
MONROE MICHIGAN 48161

ROBT J WILLIAMS MD L
158 MACOMB CT
MONROE MICHIGAN 48161

MUSKEGON

AUSTIN A AARDEMA MD
1470 PECK ST
MUSKEGON MICHIGAN 49441

ARDEN G ALEXANDER MD
1725 PECK ST
MUSKEGON MI 49441

RICHARD T ALLEN MD
768 W BROADWAY
MUSKEGON HTS MI 49444

WILLIAM J ALT MD
MEDICAL ARTS CENTER
MUSKEGON MICHIGAN 49440

DAVID A AMOS MD
307 MEDICAL ARTS BLDG
MUSKEGON MI 49440

G W ANNESSA MD
MEDICAL ARTS CENTER
MUSKEGON MICHIGAN 49440

RALPH F ASKAM MD
MEDICAL ARTS CENTER
MUSKEGON MICHIGAN 49440

ANNIE L ATKINSON MD A
R 1
MONTAGUE MICHIGAN 49437

RALPH V AUGUST MD
72 E BROADWAY
MUSKEGON HEIGHTS MI 49444

HELEN S BARNARD MD R
1382 E AIRPORT RD
MUSKEGON MI 49441

JAMES W BARNES MD
102 PROFESSIONAL BLDG
MONTAGUE MICH 49437

JAMES M BARNETT MD M
2892 BAYLIS DR NORTH
ANN ARBOR MI 48104

ARTHUR L BENEDICT JR
22 W SOUTHERN AVE
MUSKEGON MICH 49441

ROBT E BLOOM MD
MEDICAL ARTS CENTER
MUSKEGON MICH 49440

ROBT E BOLTHOUSE MD
2101 PECK ST
MUSKEGON HTS MICH 49444

WM H BOND MD
3535 PARK ST
MUSKEGON MICH 49444

DE VERE R BOYD MD
1735 PECK ST
MUSKEGON MICH 49441

JACK L BOYD MD A
BOX C
TRAVERSE CITY MI 49684

PARK S BRADSHAW MD
MEDICAL ARTS CENTER
MUSKEGON MICH 49440

JAMES H BULTEMA MD
1470 PECK ST
MUSKEGON MI 49441

J MAX BUSARD MD
1200 RANSOM
MUSKEGON MICHIGAN 49442

THOS R BUSARD MD
MEDICAL ARTS CENTER
MUSKEGON MICHIGAN 49440

MR JAMES C CARLSON A
2060 BELMONT
MUSKEGON MI 49441

JAMES S CETON MD A
SUDAN INTERIOR MISSION
GALMI PAR MADAOUA
REPUBLIC OF NIGER
WEST AFRICA

WM S CHAPIN MD A
2125 MAFFETT ST
MUSKEGON HEIGHTS MI 49444

ANTONIO CHIASSON MD
4056 NOB HILL DR
MUSKEGON MICHIGAN 49441

J W CHRISTOPHERSEN MD
1276 LAKE SHORE DR
MUSKEGON MI 49444

HENRY W CLAPP MD
202 WESTGATE MED TWR
MUSKEGON MI 49441

HOMER E CORNELL MD
3535 PARK ST
MUSKEGON HEIGHTS MI 49444

DONALD K CRANDALL MD
4155 NOB HILL DR
NORTON SHORES MI 49441

JOHN W CRAWFORD JR MD
1470 PECK ST
MUSKEGON MICHIGAN 49441

ANNE B CRONICK MD
435 WHITEHALL RD
MUSKEGON MI 49445

DOROTHY O DART MD A
4110 MAPLE LANE
RIVES JUNCTION MI 49277

KSHITISH C DAS MD
NORTON MEDICAL CTR
MUSKEGON MI 49444

ADOLPH F DASLER MD
1507 PECK ST
MUSKEGON MICH 49441

HENRY DE LEEUW MD
4090 HIGHGATE RD
MUSKEGON MI 49441

ROLAND W DEYOUNG MD
3800 MONTEVIEW
MUSKEGON MICHIGAN 49441

FRANK DISKIN MD
1324 MARQUETTE AVE
MUSKEGON MICHIGAN 49442

NICHOLAS J ELLIS MD
1891 LAKE SHORE DR
MUSKEGON MI 49444

PAUL R ENGLE MD DIR
MUSKEGON CO HLTH DEPT
MUSKEGON MI 49440

ALBERT D ENGSTROM MD
117 W COLBY
WHITEHALL MICH 49461

JOHN C FARMER MD
MEDICAL ARTS CENTER
MUSKEGON MICH 49440

ENID FILLINGHAM MD R
1034 GILES RD
MUSKEGON MI 49445

ROBT J FLES MD
1715 PECK ST
MUSKEGON MICH 49441

JOHN D FOLSOM MD
1706 PECK ST
MUSKEGON MICH 49441

PHILIP H FRANDSEN MD
1470 PECK ST
MUSKEGON MICHIGAN 49441

PHILLIP E FRY MD A
680 ASH
DENVER CO 80220

E M FUGATE MD
206 WESTGATE MED TWR
MUSKEGON MICH 49441

EVERETT W GAIKEMA MD R
605 FIRST ST
NORTH MUSKEGON MI 49445

ROBERT N GAMBLE MD
1310 WISCONSIN AVE
GRAND HAVEN MI 49417

FRANK W GARBER JR MD
601 RUDDIMAN
NO MUSKEGON MI 49445

FRANK W GARBER MD L
235 MONROE AVENUE
MUSKEGON MI 49441

ROBT E GARRISON JR MD
210 MED ARTS BLDG
MUSKEGON MI 49440

DOUGLAS H GIESE MD
305 WESTGATE MED TWR
MUSKEGON MICH 49441

JAMES L GILLARD MD
1642 PECK ST
MUSKEGON MICHIGAN 49441

MARTHA H GOLTZ MD L

MONTAGUE MI 49437

RONALD GRANT DDS A
208 MEDICAL ARTS CTR
MUSKEGON MI 49440

ERWIN GRASMAN MD
NORTON MEDICAL CTR
MUSKEGON MI 49441

CHAS J GRAYSON MD
910 W HILE RD
MUSKEGON MI 49441

LAWRENCE E GRENNAN MD
1200 RANSOM
MUSKEGON MI 49440

ROBT M GRIFFITH MD
966 W BROADWAY
MUSKEGON HGTS MI 49441

DONALD W HACK MD
MEDICAL ARTS CENTER
MUSKEGON MICHIGAN 49440

WM J HANLEY MD
315 W CLAY AVE
MUSKEGON MICHIGAN 49440

W RICHARD HARRIS MD
852 WINSLOW
MUSKEGON MI 49441

JAMES E HARRYMAN MD
1200 RANSOM ST
MUSKEGON MICH 49442

SHATTUCK W HARTWELL MD L
NORTHSHORE HOSP
NORTH MUSKEGON MI 49445

JOHN G KLEMM HARVEY MD R
MERCY HOSPITAL
MUSKEGON MI 49443

DALE W HEERES MD
657 SEMINOLE RD
MUSKEGON MI 49441

JOHN HENEVELD MD R
10902 PEORIA AVE
SUN CITY ARIZONA 85351

ROBT G HENEVELD MD
1470 PECK ST
MUSKEGON MICHIGAN 49441

MARY E HENNESSY MD A
1200 RANSOM ST
MUSKEGON MI 49442

OSBIE J HERALD MD
208 WESTGATE MDCL TWR
MUSKEGON MI 49441

LELAND E HOLLY MD L
889 N SECOND ST
MUSKEGON MI 49440

LELAND E HOLLY II MD
889 N SECOND ST
MUSKEGON MICH 49440

WM J HORNBECK MD
3535 PARK ST
MUSKEGON MICH 49444

W LEONARD HOWARD MD
635 FRANKLIN ST
N MUSKEGON MI 49445

RICHARD A HUNTLEY MD
1704 W SHERMAN BLVD
MUSKEGON MICHIGAN 49441

ROBT M JESSON MD
1200 RANSOM ST
MUSKEGON MICH 49442

E H JOHNSTON MD
889 N SECOND ST
MUSKEGON MI 49440

ARTHUR H JOISTAD JR MD
889 N SECOND ST
MUSKEGON MICH 49440

STEPHEN P KAHN DDS A
1810 RUDDIMAN DR
NO MUSKEGON MI 49445

THOS J KANE MD M
2086 LEIMERT BLVD
OAKLAND CA 94602

CECELIA S KAY MD
1533 PECK ST
MUSKEGON MICHIGAN 49441

MARIE KEILIN MD L
1077 JEFFERSON APT 607
MUSKEGON MI 49440

CHARLES T KELSO MD
15575 OAK DRIVE
SPRING LAKE MI 49456

HOWARD J KERR MD
3054 HENRY ST
MUSKEGON MICHIGAN 49444

RICHARD KISLOV MD
1810 RUDDIMAN AVE
NORTH MUSKEGON MI 49445

INGRAM J KLEAVELAND MD
1670 PECK STREET
MUSKEGON MICHIGAN 49441

MARLIN P KRENZ MD
HACKLEY UNION BK BLDG
MUSKEGON MI 49443

EUGENE W LANGE MD R
680 WAUWATOSA RD RTE2
CEDARBURG WI 53012

EMIL J LAURETTI MD
MEDICAL ARTS CENTER
MUSKEGON MICH 49440

L A LAURETTI MD
936 SECOND ST
MUSKEGON MICHIGAN 49440

VILDA S LAURIN MD L
MEDICAL ARTS CENTER
MUSKEGON MI 49440

GEO L LE FEVRE JR MD R
726 LAKE DR
NORTH MUSKEGON MI 49445

WM M LE FEVRE MD L
1011 RUDDIMAN
NO MUSKEGON MI 49445

LLOYD J LEMMEN MD
1724 PECK ST
MUSKEGON MICHIGAN 49441

MR A T LEONARD A
435 WHITEHALL RD
MUSKEGON MI 49445

LEONEL L LODER MD
289 W WESTERN AVE
MUSKEGON MICH 49440

ROBT A LOWRY MD A
300 HOPI PLACE
BOULDER CO 80302

LEWIS E MAIRE MD
1633 PECK ST
MUSKEGON MICH 49441

C B MANDEVILLE MD L
5311 N BRISTOL
TACOMA WA 98407

DOUGLAS E MAPLES MD
2 SOUTH BUYS RD
MUSKEGON MI 49445

JACK WINTON MARRS MD
308 MEDICAL ARTS CTR
MUSKEGON MICHIGAN 49440

JOHN N MC NAIR MD
936 SECOND ST
MUSKEGON MICH 49440

PAUL E MEDEMA MD L
1017 SANFORD ST
MUSKEGON MICH 49440

MARVIN B MEENGS MD
P O BOX 788
MUSKEGON MICHIGAN 49443

LAMBERTUS MULDER MD
MEDICAL ARTS CENTER
MUSKEGON MICH 49440

C L A ODEN MD L
MEDICAL ARTS CENTER
MUSKEGON MI 49440

RICHARD R OSLUND MD
889 N SECOND ST
MUSKEGON MI 49440

ROBERT C PACKER MD
4216 HARBOR POINT DR
MUSKEGON MI 49441

FRANK W PARSONS MD
206 WESTGATE MED TWR
MUSKEGON MICHIGAN 49441

LESTER C PATERSON MD
1643 PECK ST
MUSKEGON MICH 49441

FRANK L PETTINGA MD
1470 PECK ST
MUSKEGON MICH 49441

ROBT D RISK MD
1160 RANSOM ST
MUSKEGON MICH 49442

HOWARD V SANDEN MD
1643 PECK ST
MUSKEGON MICH 49441

NORBERT W SCHOLLE MD
204 WESTGATE MED TWR
MUSKEGON MICHIGAN 49441

EMIL M SHEBESTA MD
MEDICAL ARTS CENTER
MUSKEGON MICH 49440

FREDRIC E SIMPSON MD
1903 MARQUETTE AVE
MUSKEGON MI 49442

ROBERT E SMITH MD
MEDICAL ARTS CENTER
MUSKEGON MICHIGAN 49440

THOMAS A SMITH MD
1310 WISCONSIN ST
GRAND HAVEN MI 49417

WILLIAM P STEFFEE MD A
442 VALHALLA CT
ROCHESTER MINN 55901

THOMAS E STONE MD
1900 CRESTWOOD DR
MUSKEGON MI 49441

DOLORES B STOREY PH D A
2011 APPLE AVE
MUSKEGON MI 49442

DONALD P STRATTON MD
3535 PARK ST
MUSKEGON MI 49444

F JAMES STUBBART M D
2416 PECK ST
MUSKEGON HEIGHTS MI 49444

RONALD L STUK MD
MED ARTS CTR #103
MUSKEGON MI 49440

RAYMOND E SWANSON MD
1315 RUDDIMAN AVE
NORTH MUSKEGON MI 49445

ROBT D SWEDENBURG MD
1470 PECK STREET
MUSKEGON MICH 49441

LELAND L SWENSON MD
1706 PECK ST
MUSKEGON MICH 49441

H CLAY TELLMAN MD
315 W CLAY
MUSKEGON MI 49440

R K TORREY MD
WESTGATE MEDICAL BLDG
MUSKEGON MI 49441

CHAS M TOY MD
1067 PINE ST
MUSKEGON MICH 49442

WM H TYLER MD
1435 PECK ST
MUSKEGON MICH 49441

C A VANDERVELDE MD
1470 PECK ST
MUSKEGON MICHIGAN 49441

WM C VANGELDER MD
NORTON MEDICAL CTR
MUSKEGON MICH 49441

TED VELLENGA A
3789 WICKHAM DR
MUSKEGON MI 49441

GEO A VOIKOS MD
1470 PECK
MUSKEGON MICHIGAN 49441

EDWARD H WAGENAAR MD
3054 HENRY ST
MUSKEGON MICHIGAN 49444

NORMAN L WELCH MD
MERCY HOSP
MUSKEGON MI 49443

WARREN G WHITE JR MD
307 WESTGATE MED TWR
MUSKEGON MICHIGAN 49441

SILAS C WIERSMA MD A
1115 SUMMIT AVE
ST ALBANS W VA 25177

RICHARD T WILCOX MD
1700 CLINTON ST
MUSKEGON MI 49442

BERNARD C WILDGEN MD
MEDICAL ARTS CENTER
MUSKEGON MICHIGAN 49440

CARL A WILKE MD R
QRTS 2 WARREN AFB
CHEYENNE WY 82001

DALE L WILLIAMS MD
3535 PARK ST
MUSKEGON HEIGHTS MI 49444

EDWARD V WILLIAMS MD
2501 BAKER ST
MUSKEGON HEIGHTS MI 49444

B DAVID WILSON MD A
1724 TIMSON LANE
BLOOMFIELD HILLS MI 48013

BURTON J WOLTERS MD
103 MEDICAL ARTS CTR
MUSKEGON MI 49440

NEWAYGO

J C DECKER MD
52 MAPLE SE
GRANT MI 49327

MAYNARD DEKRYGER MD
220 W PINE ST
FREMONT MI 49412

JESS DE YOUNG MD
111 W DAYTON
FREMONT MI 49412

ROBT W EMERICK MD
BOX 147
FREMONT MI 49412

LAMBERT J GEERLINGS MD L
194 N HILLCREST DR
FREMONT MI 49412

J PAUL KLEIN MD R
P O BOX 111
FREMONT MI 49412

BROOKER L MASTERS MD
111 W DAYTON
FREMONT MI 49412

RAMZY N MIKHAIL MD
3405 KENWOOD
TOLEDO OHIO 43606

HECTOR E MORALES MD
111 W DAYTON ST
FREMONT MI 49412

ROBERT PAINTER MD
52 MAPLE SE
GRANT MI 49327

ROBT E PAXTON MD
220 W PINE
FREMONT MI 49412

NORMAN PEDELTY MD
38 STATE RD
NEWAYGO MI 49337

TUNIS VANDEN BERG MD
220 W PINE
FREMONT MI 49412

NORTHERN MICHIGAN

ROBT F ALLEN MD
LOCKWOOD HOSP
PETOSKEY MICH 49770

BERNHARD T ALM MD
418 PETOSKEY ST
PETOSKEY MICH 49770

LEO J BINGLEY JR MD
BURNS CLINIC
PETOSKEY MI 49770

BENJ B BLUM MD
1208 E MITCHELL ST
PETOSKEY MICHIGAN 49770

DEAN C BURNS MD
ROUTE 1
PETOSKEY MI 49770

JOSEPH W CHRISTIE MD
BEAVER ISLAND MED CTR
ST JAMES MI 49782

P J CONNAUGHTON MD
BURNS CLINIC
PETOSKEY MICHIGAN 49770

JOS B CONTI MD
924 E MITCHELL ST
PETOSKEY MICH 49770

WM S CONWAY MD
BURNS CLINIC
PETOSKEY MI 49770

HARRY R CUSTER MD
723 PARK AVE
CHARLEVOIX MI 49720

WILLIAM A DAWSON MD
BURNS CLINIC
PETOSKEY MICHIGAN 49770

GERALD DRAKE MD
511 WAUKAZOO
PETOSKEY MICH 49770

DEAN C ELLIOTT MD
BURNS CLINIC
PETOSKEY MICH 49770

BRADFORD S FOSTER MD
226 PARK AVE
PETOSKEY MI 49770

SANDERS A FRYE MD
BURNS CLINIC
PETOSKEY MICHIGAN 49770

LAWRENCE E GRATE MD
9520 LAKE ST
ELLSWORTH MI 49729

ALOYSIUS J HEGENER MD
1020 HOWARD ST
PETOSKEY MICH 49770

RATEB HOMSI MD
430 S MAIN ST
CHEBOYGAN MI 49721

JAMES A KILEY MD
348 COUNTRY CLUB RD
PETOSKEY MI 49770

BENJ J KLEINSTIVER MD
517 E LAKE ST
PETOSKEY MI 49770

RICHARD A KNECHT MD
226 PARK AVE
PETOSKEY MICHIGAN 49770

R A KUTCIPAL MD
211 SUNSET
PETOSKEY MI 49770

WALTER E LARSON MD
456 S HURON
CHEBOYGAN MICH 49721

NICHOLAS LENTINI MD

CHEBOYGAN MI 49721

JOHN H LIGNELL MD
R 3 DIVISION ST
CHARLEVOIX MICHIGAN 49720

JOHN G LIPSKI MD
603 E LAKE ST
PETOSKEY MI 49770

ROBT G MARTIN MD
707 BRIDGE
CHARLEVOIX MICHIGAN 49720

VICTOR S MATESKON MD
SUNSET BLVD
PETOSKEY MICH 49770

FREDERICK C MAYNE M D L
P O BOX 387
CHEBOYGAN MI 49721

W L MCCULLOUGH MD
115 CLINTON ST
PETOSKEY MICHIGAN 49770

JOHN F MCENROE MD
1005 E MITCHELL ST
PETOSKEY MICHIGAN 49770

ROBT D MC KNIGHT MD
LINCOLN PLACE
PETOSKEY MICH 49770

ROBERT A MENGEBIER MD
BLANCHARD RD
PETOSKEY MI 49770

JOANNE E MERTZ MD
RESORT PIKE
PETOSKEY MICH 49770

N THOMAS O KEEFE
516 BAY ST
PETOSKEY MI 49770

JACK R POSTLE MD
ARLINGTON HEIGHTS
PETOSKEY MICH 49770

CARL T RAUCH MD
420 RIVERSIDE DR
CHEBOYGAN MICH 49721

LEONARD W REUS MD
226 PARK AVE
PETOSKEY MICH 49770

JOHN R RODGER MD

BELLAIRE MI 49615

G B SALTONSTALL MD L
112 CLINTON ST
CHARLEVOIX MI 49720

JOHN H SAVORY MD

EAST JORDAN MI 49727

ROBT E SHANAHAN MD
1125 VALLEY VIEW
PETOSKEY MICHIGAN 49770

JOHN A SHEETS MD
529 MICHIGAN
PETOSKEY MI 49770

J F HENRI SIMARD MD
PENNSYLVANIA PLAZA
PETOSKEY MI 49770

ROLLIN F SNIDE MD
125 N MAIN ST
CHEBOYGAN MICHIGAN 49721

JOSEPH A SOLOMON MD
147 CRESTVIEW DR
ABINGDON VA 24210

JAMES R STRINGHAM MD L
225 BACKUS ST
CHEBOYGAN MI 49721

JOHN H TANTON MD
BURNS CLINIC
PETOSKEY MICHIGAN 49770

ROBT M TAYLOR MD
LINCOLN PLACE
PETOSKEY MICH 49770

VICTOR TSALOFF MD
BURNS CLINIC
PETOSKEY MI 49770

GUSTAV A UHLICH MD
E MITCHELL RD
PETOSKEY MICHIGAN 49770

JERRIAN VAN DELLEN MD
WATER ST
EAST JORDAN MICH 49727

R J VANDEN BRINK MD
BURNS CLINIC
PETOSKEY MI 49770

WILLIAM L WATERS MD
704 E LAKE
PETOSKEY MI 49770

RICHARD WEBER MD
BURNS CLINIC
PETOSKEY MI 49770

JEAN H WEBSTER MD
200 SUNSET ST
PETOSKEY MICH 49770

KATHRYN D WEBURG MD
ROUTE 3
PETOSKEY MI 49770

IAN D WILSON MD
611 E LAKE
PETOSKEY MI 49770

BEVERLY A ZELT MD
BURNS CLINIC MED CTR
PETOSKEY MI 49770

OAKLAND

VERNON C ABBOTT MD L
1405 PONTIAC ST BK
PONTIAC MI 48058

MARTIN M ABBRECHT MD
800 S ADAMS RD
BIRMINGHAM MI 48011

H R ACKERMAN JR MD
909 WOODWARD AVE #104
PONTIAC MI 48053

ROBIN ADAIR MD
800 S ADAMS
BIRMINGHAM MICH 48011

FREDERICK M ADAMS MD
800 S ADAMS
BIRMINGHAM MI 48011

SEYMOUR S ADELSON MD
20905 GREENFIELD RD
SOUTHFIELD MI 48075

KRISHAN L AGGARWAL MD
PONTIAC STATE HOSPITAL
PONTIAC MI 48053

ASIRUDDIN AHMAD MD
5770 M-15
CLARKSTON MI 48016

DONALD G ALBERT MD
3535 W 13 MILE RD
ROYAL OAK MICHIGAN 48072

ROBT W ALBRECHT MD
2111 CASS LAKE RD
KEEGO HARBOR MI 48033

YASAR M ALKAR MD
159 PIERCE ST NO 202
BIRMINGHAM MI 48011

ISIDRO C ALMEDA MD A
PONTIAC GEN HOSPITAL
PONTIAC MI 48053

ADNAN ALSHABKHOUN MD
33100 12 MILE RD
FARMINGTON MI 48024

F ANDRAKOVICH MD
5554 LAHSER RD
BIRMINGHAM MI 48010

JAIME V ARAGONES MD
134 W UNIVERSITY DR
ROCHESTER MI 48063

FEDERICO A ARCARI MD
606 N WOODWARD AVE
BIRMINGHAM MI 48011

JOSEPH A ARENA JR M D
31815 SOUTHFIELD RD
BIRMINGHAM MICHIGAN 48009

ROY E ARONS MD
7133 LINDENMERE
BIRMINGHAM MI 48010

RAYMOND ASHARE MD
35 S JOHNSON
PONTIAC MICHIGAN 48053

MANOU C ATASH MD
3923 ORCHARD
SIOUX CITY IOWA 51101

HAL G AULIE MD
3535 W 13 MILE RD
ROYAL OAK MI 48072

MOHSEN AVAREGAN MD
6707 HEATHER HEATH LN
BIRMINGHAM MI 48010

MUSTAFA AVCI MD
6846 COOLEY LAKE RD
UNION LAKE MI 48085

LORRAINE E AWES MD
500 W HURON ST
PONTIAC MICH 48053

KAMBIZ AYROM MD
1760 KIRTS BLVD APT107
TROY MI 48084

KURT BAIER MD
3816 CRESTLAKE DR
BLOOMFIELD HILLS MI 48013

FREDERICK A BAKER MD L
1936 W ANKLAM RD
TUCSON AZ 85705

JOHN V BALIAN MD
134 W UNIV DR #201
ROCHESTER MI 48063

ROBT J BANNOW MD
880 WOODWARD AVE
PONTIAC MICH 48053

CHAS P BARKER MD
214 WABEEK BLDG
BIRMINGHAM MICH 48011

HOWARD B BARKER MD L
1006 STRATFORD LANE
BLOOMFIELD HILLS MI 48013

NASSER BARKHORDARI MD
29510 FOXGROVE
FARMINGTON MI 48024

PETER P BARLOW MD
31815 SOUTHFIELD RD
BIRMINGHAM MICHIGAN 48009

BRADLEY T BARNES MD
312 MAYWOOD
ROCHESTER MI 48063

DONALD J BARNES MD L
2134 A VIA PUERTA
LAGUNA HILLS CALIF 92653

CHARLES G BARONE MD
751 CHESTNUT ST
BIRMINGHAM MI 48008

NORMAN L BARR MD
965 ORCHARD RIDGE RD
BLOOMFIELD HILLS MI 48013

JOHN L BARRETT M D
3535 W 13 MILE RD #608
ROYAL OAK MICHIGAN 48072

ROBERT A BARRON MD
4256 ORCHARD LAKE RD
ORCHARD LAKE MI 48033

HENRY J BARSCH MD
1414 W FAIR AVE
MARQUETTE MI 49855

BRUCE D BAUER MD
3229 WOODWARD AVE
BERKLEY MI 48072

EDWARD G BAUER MD
101 1/2 N SAGINAW
PONTIAC MICH 48058

E WILLIAM BAUER MD
3229 WOODWARD AVE
BERKLEY MI 48072

FRANZ BAUER MD
909 WOODWARD AVE
PONTIAC MICHIGAN 48053

SHELBY M BAYLIS MD
35 S JOHNSON
PONTIAC MICHIGAN 48053

WILLARD G BEATTIE MD R
3048 57TH AVE NORTH
ST PETERSBURG FL 33714

WM L BEAUREGARD MD
1665 W 12 MILE RD
BERKLEY MI 48072

OTTO O BECK MD L
701 BARCELONA AVE
VENICE FL 33595

PAUL M BECKER MD
1890 SOUTHFIELD RD
BIRMINGHAM MI 48009

WARREN F BELKNAP MD
1809 S MAIN ST
PLEASANT RIDGE MICH 48069

DURAND BENJAMIN JR MD A
PONTIAC GENERAL HOSP
PONTIAC MI 48053

MERRILL P BENOIT MD
PONTIAC MTR DIV GMC
PONTIAC MICHIGAN 48053

RICHARD M BERG MD
15901 W 9 MILE RD #110
SOUTHFIELD MI 48075

CARY D BERGMAN MD
26615 GREENFIELD
SOUTHFIELD MI 48075

BERNARD D BERMAN MD
1200 N TELEGRAPH RD
PONTIAC MICHIGAN 48053

CHARLES BERMAN MD
461 WEST HURON ST
PONTIAC MI 48053

GILBERT M BERMAN MD
24601 COOLIDGE
OAK PARK MI 48237

JAY BERNSTEIN MD
3601 W 13 MILE RD
ROYAL OAK MI 48072

DUANE D BETTS MD A
121 SEMINOLE
PONTIAC MI 48053

JOHN T BEUKER MD
15901 W 9 MILE RD #206
SOUTHFIELD MI 48075

HANS A BEYER MD
5675 KOLLY RD
BIRMINGHAM MICHIGAN 48010

OSCAR BIGMAN MD
18597 W 10 MILE RD
SOUTHFIELD MI 48075

CARL H BIRKELO MD
4680 DIXIE HWY
DRAYTON PLAINS MICH 48020

JOHN R BIRMINGHAM MD
29632 POND RIDGE
FARMINGTON MI 48024

JAMES R BLAKENEY MD
449 E PIKE ST
PONTIAC MI 48058

JANE BLUE MD
19125 HILLCREST
BIRMINGHAM MICH 48009

MALCOLM D BOESKY MD
26789 WOODWARD AVE
HUNTINGTON WDS MICH 48070

THORNTON I BOILEAU MD
2075 E 14 MILE RD
BIRMINGHAM MICH 48008

ALAN E BOLTON MD
3601 W 13 MILE RD
ROYAL OAK MI 48072

ROBT M BOOKMYER MD
31815 SOUTHFIELD RD
BIRMINGHAM MICH 48009

PETER E BOSS MD
15901 W NINE MILE RD
SOUTHFIELD MI 48075

ROMAN E BOUCHER MD
4200 N WOODWARD AVE
ROYAL OAK MICHIGAN 48072

NABIL R BOUTROS MD
1100 W UNIVERSITY DR
ROCHESTER MI 48063

CHAS L BOWERS MD
909 WOODWARD AVE
PONTIAC MI 48053

NEAL C BRADY MD
3535 W 13 MILE RD
ROYAL OAK MICHIGAN 48072

WM W BRONSON MD
444 W UNIVERSITY DR
ROCHESTER MI 48063

ARNOLD L BROWN MD
35 S JOHNSON
PONTIAC MICH 48053

DONALD BROWN MD
1100 W UNIVERSITY DR
ROCHESTER MI 48063

RICHARD T BROWNE MD
880 WOODWARD #105
PONTIAC MI 48053

HENRY G BRYAN MD
22100 COOLIDGE
OAK PARK MICHIGAN 48237

JOHN B BRYAN MD
4045 W 13 MILE RD
ROYAL OAK MICHIGAN 48072

F W BRYANT MD
3535 W 13 MILE RD
ROYAL OAK MI 48072

ALEXANDER S Z BUDD MD
P O BOX 172
BLOOMFIELD HILLS MI 48013

ROBERT C BUEHRIG
5790 M 15
CLARKSTON MICH 48016

R W BULLARD JR MD
5790 M 15
CLARKSTON MICHIGAN 48016

WILLIAM G BUNTO MD
5965 ORION RD
ROCHESTER MI 48063

JOHN H BURGER MD
31815 SOUTHFIELD RD
BIRMINGHAM MICHIGAN 48009

BRUNO BURGESS MD
29250 LONGVIEW ST
WARREN MICHIGAN 48093

CHAUNCEY G BURKE MD L
35 W HURON ST
PONTIAC MI 48058

JOSEPH F BURTKA MD
26505 JOHN R ST
MADISON HGTS MI 48071

ROBT A BYBERG MD
3535 W 13 MILE RD
ROYAL OAK MI 48072

G P CABRERA MD
3535 W 13 MILE RD
ROYAL OAK MI 48072

ETHEL T CALHOUN MD L
707 LAKEVIEW AVE
BIRMINGHAM MI 48009

DAVID R CALVER MD A
PONTIAC GEN HOSPITAL
PONTIAC MI 48053

FREDK W CAMPBELL JR MD
648 N WOODWARD AVE
BIRMINGHAM MI 48011

MALCOLM D CAMPBELL MD R
435 RIDGEWOOD RD
KEY BISCAYNE FL 33149

JOS D CARLISLE MD
3535 W 13 MILE RD
ROYAL OAK MICHIGAN 48072

BARBARA F CARLSON MD
33120 W 12 MILE RD
FARMINGTON MI 48024

G B CARPENTER JR MD
622 N WOODWARD
BIRMINGHAM MICHIGAN 48011

JOYCE M CARROW MD A
1469 HIGHMOOR WAY
BLOOMFIELD HILLS MI 48013

EDWARD F CASHMAN MD
15908 GLASTONBURY RD
DETROIT MI 48223

NICANOR F CASTEDO MD
4189 SUNNINGDALE DR
BLOOMFIELD HILLS MI 48013

ANTHONY F CEFAI MD
35 S JOHNSON
PONTIAC MICH 48053

DONALD P CENTO MD A
PONTIAC GENERAL HOSP
PONTIAC MI 48053

ROBERT J CEREMSAK MD
976 S READING
BLOOMFIELD HILLS MI 48013

C T CERKEZ MD
134 W UNIVERSITY
ROCHESTER MI 48063

DOUGLAS CHANDLER MD
1890 SOUTHFIELD RD
BIRMINGHAM MICH 48009

JOS H CHANDLER MD
309 NORTHLAND MED BDLG
SOUTHFIELD MICHIGAN 48075

JAMES T CHENG MD R
9 BUTTERWORTH DR
MORRISTOWN N J 07960

NICHOLAS CHERUP MD
PONTIAC GENERAL HOSP
PONTIAC MICHIGAN 48053

MERLE A CHILDERS MD
134 W UNIVERSITY DR
ROCHESTER MI 48063

NELDAGAE CHISA MD
26711 WOODWARD AVE
HUNTINGTON WDS MICH 48070

CYNTHIA CHOW MD
134 W UNIV DR #308
ROCHESTER MI 48063

TAI CHUNG MD
PONTIAC STATE HOSP
PONTIAC MI 48053

HARRIET A CLARKE MD
488 S FOX HILLS DR #3
BLOOMFIELD HILLS MI 48013

ALAN L CLINE MD
4299 ROSEBERRY
DRAYTON PLAINS MICH 48020

THOS H COBB MD
880 WOODWARD AVE
PONTIAC MICH 48053

CARL J COHEN MD
909 WOODWARD AVE #118
PONTIAC MI 48053

DANIEL H COHEN MD
20905 GREENFIELD RD
SOUTHFIELD MI 48075

JACK J COHEN MD
17226 ADRIAN RD
SOUTHFIELD MICHIGAN 48075

LEWIS COHEN MD
26602 DUNDEE RD
HUNTINGTON WOODS MI 48070

MELVIN F COHEN MD
28590 RIVERCREST DR
SOUTHFIELD MI 48075

EDWARD F COLLINS MD
35 W HURON ST #1040
PONTIAC MICH 48058

FRANK J CONDON MD L
876 LAKEPOINTE RD
GROSSE PTE PARK MI 48230

CECIL D CONRAD MD
3027 N WOODWARD AVE
ROYAL OAK MICH 48072

NORTON J COOKSEY MD
3535 W 13 MILE RD
ROYAL OAK MICHIGAN 48072

ROY V COOLEY MD
318 S BLVD WEST
PONTIAC MICHIGAN 48053

EDMOND L COOPER MD
4200 N WOODWARD AVE
ROYAL OAK MI 48072

ROBT S COOPER MD
3027 N WOODWARD AVE
ROYAL OAK MICH 48072

K E CORRIGAN PH D A
300 WARREN COURT
BIRMINGHAM MI 48009

RALPH J COSKEY MD
22100 COOLIDGE
OAK PARK MICHIGAN 48237

HENRY O COUCKE MD R
30785 WOODGATE DR
SOUTHFIELD MI 48075

ROBERT W COUNTS MD
155 REDDINGWOOD DR
ROCHESTER MI 48063

PAUL D CROISSANT MD
445 W HURON ST
PONTIAC MI 48053

ROGER E CRUM MD
35 S JOHNSON
PONTIAC MICHIGAN 48053

MICHAEL J CURTIN MD
4210 W NEWLAND
ORCHARD LAKE MI 48033

ROBERT M CUTLER MD
909 WOODWARD AVE
PONTIAC MI 48053

WM M CUTLER MD
800 S ADAMS RD
BIRMINGHAM MICH 48011

CARL W DAHLGREN MD L
3023 ORCHARD LAKE
KEEGO HARBOR MICH 48033

JAMES D DARNLEY MD
26711 WOODWARD AVE
HUNTINGTON WOODS MI 48070

DONALD N DAWSON MD
PONTIAC STATE HOSP
PONTIAC MI 48053

RICHARD C DAYTON MD
427 W UNIVERSITY DR
ROCHESTER MICHIGAN 48063

MURRAY N DEIGHTON MD
23023 ORCHARD LAKE RD
FARMINGTON MICHIGAN 48024

MALCOLM J DELANEY MD
23023 ORCHARD LAKE RD
FARMINGTON MICHIGAN 48024

HILBERT H DE LAWTER MD
3535 W 13 MILE RD
ROYAL OAK MICHIGAN 48072

JACOB B DELEVIE MD
35 W HURON ST #700
PONTIAC MI 48058

J WILLIAM DERR MD
3535 W 13 MILE RD #506
ROYAL OAK MI 48072

WM L DEUTSCH MD
600 W 11 MILE RD
ROYAL OAK MICH 48067

H LOUIS DE VITO MD
3115 ANGELUS DR
PONTIAC MICHIGAN 48055

DAVID H DINGER MD
2561 ELIZABETH LK RD
PONTIAC MI 48054

WILLIAM R DITO MD
PONTIAC GENERAL HOSP
PONTIAC MICHIGAN 48053

EDWIN J DOBSKI MD
909 WOODWARD AVE
PONTIAC MICH 48053

LOUIS E DOERR JR MD
1413 S WASHINGTON
ROYAL OAK MI 48067

MASSOUD DOROSTKAR MD
45455 HARMONY LANE
BELLEVILLE MI 48111

JOHN M DORSEY JR MD
31815 SOUTHFIELD RD
BIRMINGHAM MICH 48009

DALE R DREW MD
909 WOODWARD AVE
PONTIAC MICHIGAN 48053

EDWARD J DROGOWSKI MD
134 W UNIVERSITY DR
ROCHESTER MICHIGAN 48063

PETER A DUHAMEL MD
134 W UNIV DR #103
ROCHESTER MICHIGAN 48063

GREGG L DUNLAP MD
2870 ORCHARD LAKE RD
KEEGO HARBOR MICH 48033

GERALD G DURAK MD
7105 SHERWOOD DR
BIRMINGHAM MICHIGAN 48010

NORMAND E DUROCHER MD
35 S JOHNSON
PONTIAC MICH 48053

ROBT W DUSTIN MD
1314 W LINCOLN
BIRMINGHAM MICH 48009

HOWARD J DWORKIN MD
3601 W 13 MILE RD
ROYAL OAK MI 48072

EDWARD E ELDER JR MD
1116 VOORHEIS
PONTIAC MICH 48053

ROBT N ELLIOTT MD
3535 W 13 MILE RD
ROYAL OAK MI 48072

RICHARD F ELTON MD
15901 W 9 MILE RD #620
SOUTHFIELD MI 48075

CECIL W ELY JR MD
189 TOWNSEND #200
BIRMINGHAM MI 48011

Z F ENDRESS MD
35 S JOHNSON
PONTIAC MI 48053

JOHN B ENGEL MD R
15463 ASBURY PARK
DETROIT MI 48227

JACK F ENSROTH MD
1100 N WOODWARD
BIRMINGHAM MICHIGAN 48011

NEVIT O ERGIN MD
860 LONE PINE RD
BLOOMFIELD HILLS MI 48013

JOHN O ESSLINGER M D
622 N WOODWARD AVE
BIRMINGHAM MICH 48011

VALENTINE ESSLINGER MD
3535 W 13 MILE RD
ROYAL OAK MI 48072

A P ESTANISLAO MD
3329 WEST SHORE
ORCHARD LAKE MI 48033

GEO S EVSEEFF MD
3535 W 13 MILE RD
ROYAL OAK MI 48072

LOUIS A FABIAN MD
2351 SOMERSET
TROY MI 48084

JALIL FARAH MD
3525 BROOKSIDE
BLOOMFIELD HILLS MI 48013

ROBERT A FARGHER MD
660 SOUTH BOULEVARD E
PONTIAC MI 48053

PAUL FECKO MD
189 TOWNSEND #302
BIRMINGHAM MI 48009

MICHAEL J FEDERMAN MD
26657 WOODWARD
HUNTINGTON WOODS MI 48070

ALFREDO FERREYRA MD
3-F PONTIAC MED BLDG
35 S JOHNSON ST

PONTIAC MI 48053

KRIKER FICICI MD
602 BURTMAN DR
TROY MI 48084

WM F FIDLER MD
1200 N TELEGRAPH RD
PONTIAC MI 48053

L JEROME FINK MD
500 W HURON ST
PONTIAC MICHIGAN 48053

LAWRENCE J FINKELL MD
15231 W 7 MILE RD
DETROIT MI 48235

LIONEL FINKELSTEIN MD
577 ARLINGTON
BIRMINGHAM MI 48009

N S FIRESTONE MD
23023 ORCHARD LAKE RD
FARMINGTON MI 48024

GORDON R A FISHMAN MD
25721 COOLIDGE
OAK PARK MI 48237

WM J FLAHARTY MD
25000 W TEN MILE RD
SOUTHFIELD MICH 48075

A G FLEURQUIN MD
4415 PARK LANE CT
BLOOMFIELD HILLS MI 48013

JOHN R FLICK MD
120 W SECOND ST
ROYAL OAK MICH 48067

RALPH M FOX MD
600 S ADAMS RD
BIRMINGHAM MICHIGAN 48011

NAPOLEON FRANCO MD
PONTIAC STATE HOSP
PONTIAC MI 48053

ARTHUR M FREEDMAN MD
20100 WEST 12 MILE RD
SOUTHFIELD MI 48075

JAMES L FREY MD
NORTHLAND MED BLDG#704
SOUTHFIELD MI 48075

HAROLD A FURLONG MD L
35 S JOHNSON AVE
PONTIAC MI 48053

JOHN A FUSHMAN MD
4200 N WOODWARD AVE
ROYAL OAK MICHIGAN 48072

HOWARD B GABA MD
8245 HENDRIE
HUNTINGTON WOODS MI 48070

BEN GABER MD
10831 W TEN MILE RD
OAK PARK MI 48237

JOS J GADBAW MD
33925 OAKLAND ST
FARMINGTON MI 48024

F GAENSBAUER MD
880 WOODWARD #108
PONTIAC MI 48053

R A GAGLIARDI MD
2515 ENDSLEIGH DR
BIRMINGHAM MI 48010

GILBERT J GALENS MD
31815 SOUTHFIELD RD
BIRMINGHAM MICHIGAN 48009

RICHARD R GALPIN MD
525 SOUTHFIELD RD
BIRMINGHAM MICH 48009

TELESFORD E GARCIA MD A
PONTIAC GEN HOSP
PONTIAC MI 48053

MAX J GARBER M D
23023 ORCHARD LAKE RD
FARMINGTON MICHIGAN 48024

DONALD M GARLAND MD
PONT MOTOR GLENWOOD AV
PONTIAC MI 48053

JOANN M GATES MD
65 S TELEGRAPH RD
PONTIAC MI 48053

RICHARD C GAUSE MD
31815 SOUTHFIELD RD
BIRMINGHAM MICHIGAN 48009

NORMAN F GEHRINGER MD
2335 S COMMERCE RD
WALLED LAKE MI 48088

EDGAR J GEIST JR MD
1500 WALTON BLVD
ROCHESTER MICHIGAN 48063

JAMES W GELL MD
35 S JOHNSON AVE
PONTIAC MICH 48053

LAZARO GELSTEIN MD
909 WOODWARD AVE
PONTIAC MI 48053

EUGENE A GELZAYD MD
20905 GREENFIELD RD
SOUTHFIELD MI 48075

GEORGE R GERBER MD
310 W UNIVERSITY DR
ROCHESTER MI 48063

FRANK B GERLS MD L
4425 MOTORWAY DR
PONTIAC MI 48054

PIERRE F GIAMMANCO MD
880 WOODWARD AVE #110
PONTIAC MI 48053

WELLINGTON C GIBSON MD
216 COMMERCE ST
MILFORD MICH 48042

MATTHEW J GILL MD
1030 RIKER BLDG
PONTIAC MICHIGAN 48058

HAROLD GLEN MD
26684 GRAND RIVER
DETROIT MICHIGAN 48240

DOROTHY M GOERNER MD A
338 PILGRIM
BIRMINGHAM MI 48009

DARRYL T GOLDBERG MD
26789 WOODWARD AVE 101
HUNTINGTON WOODS MI 48070

HOWARD S GOLDBERG MD
24777 GREENFIELD RD
SOUTHFIELD MI 48075

HERBERT GOLDSTEIN MD
22100 COOLIDGE HWY
OAK PARK MI 48237

ROGER L GONDA MD
15901 W 9 MILE RD #110
SOUTHFIELD MI 48075

WAYNE T GOOD MD
3306 AUBURN RD
AUBURN HEIGHTS MICH 48057

NORMAN J GOODE JR MD
2000 SECOND AVE
DETROIT MI 48226

CLAYTON H GORDON MD
1099 N CRANBROOK RD
BIRMINGHAM MICH 48009

SEYMOUR GORDON MD
3535 W 13 MILE RD
ROYAL OAK MI 48072

JOSEPH G GOUGH MD
900 WOODWARD AVE
PONTIAC MI 48053

PAUL L GRADOLPH MD
23338 WOODWARD AVE
FERNDALE MI 48220

P MIGUEL A GRANADOS MD
29614 MILTON
MADISON HEIGHTS MI 48071

MURRAY H GRAY MD
22100 COOLIDGE
OAK PARK MI 48237

J DONALD GREEN MD
6405 TELEGRAPH RD
BLDG D SUITE 2

BIRMINGHAM MI 48010

RALPH S GREEN MD
23300 GREENFLD RD #223
OAK PARK MI 48237

WILLARD M GREEN MD
35 S JOHNSON
PONTIAC MICH 48053

JOHN N GREKIN MD
15901 W 9 MILE RD #620
SOUTHFIELD MI 48075

THOS D GREKIN MD
3535 W 13 MILE RD
ROYAL OAK MI 48072

M A GRISHKOFF MD
909 WOODWARD AVE #15
PONTIAC MI 48053

SOLOMON C GROSSMAN MD
26339 WOODWARD AVE
HUNTINGTON WOODS MI 48070

FERIDUN GURUL MD
32316 GRAND RIVER
FARMINGTON MI 48024

DAVID C GUSTAFSON MD
3535 W 13 MILE RD
ROYAL OAK MI 48072

EVERETTE GUSTAFSON MD
35 S JOHNSON
PONTIAC MICH 48053

MARIA A GUTIERREZ MD
195 CRANBROOK CROSS RD
BIRMINGHAM MI 48010

MEYER A GUTTERMAN MD
25085 COOLIDGE HWY
OAK PARK MI 48237

MERLE A HAANES MD
909 WOODWARD AVE
PONTIAC MICHIGAN 48053

GILBERT W HAGUE MD
739 WESTVIEW RD
BLOOMFIELD HILLS MI 48013

JOHN HALICKI MD
PONTIAC STATE HOSP
PONTIAC MI 48053

LEE H HALSTED MD
23023 ORCHARD LAKE RD
FARMINGTON MICHIGAN 48024

GEORGE J HAMBALGO MD
4045 WEST 13 MILE RD
ROYAL OAK MI 48072

JOEL I HAMBURGER MD
20905 GREENFIELD RD
SOUTHFIELD MICHIGAN 48075

QUENTIN P HAMILTON MD
20905 GREENFIELD
SOUTHFIELD MICHIGAN 48075

MAOLIN HAN MD
3725 AUBURN RD
AUBURN HEIGHTS MICH 48057

JOSEPH W HANCE MD
4137 WHITE BIRCH DR
ORCHARD LAKE MI 48053

M SHAMSUL HAQUE MD
6405 TELEGRAPH RD
BIRMINGHAM MI 48010

LEWIS G HARMON MD
1775 E 14 MILE RD
BIRMINGHAM MICH 48008

JOHN A HARROLD MD
534 FRANKLIN RD
PONTIAC MICHIGAN 48053

MARTIN HART MD
880 N WOODWARD AVE #19
PONTIAC MI 48053

CHARLES F HARTLEY MD A
3142 KINGSLEY DR
TROY MI 48084

CAMPBELL HARVEY MD L
SAN MIGUEL DE ALLENDE

APTADO POSTAL 127
GUANAJUATO MEXICO

CARL M HASEGAWA MD
2953 PALMERSTON
TROY MI 48084

JOHN B HASSBERGER MD
620 N WOODWARD AVE
BIRMINGHAM MICH 48011

WM S HATHAWAY MD R
425 WALNUT ST
ROCHESTER MI 48063

H S HAYDEN PH D A
300 WARREN COURT
BIRMINGHAM MI 48009

MANES S HECHT MD
26711 WOODWARD
HUNTINGTON WOODS MI 48070

JAMES E HENDERSON MD
909 WOODWARD AVE
PONTIAC MICHIGAN 48053

WORTH W HENDERSON MD
1307 S WASHINGTON
ROYAL OAK MICH 48067

OWEN S HENDREN MD L
2672 W CASAS SR
TUCSON ARIZONA 85704

FRANK R HENDRICKS MD
21701 W 11 MILE RD
SOUTHFIELD MICHIGAN 48075

COLONEL R HENRY MD L
125 W NINE MILE RD
FERNDALE MI 48220

EDWARD L HERMAN MD
909 WOODWARD
PONTIAC MI 48053

CHARLES R HERMES MD
4680 DIXIE HIGHWAY
CRAYTON PLAINS MI 48020

DONALD J HEYBOER MD
ST JOSEPH MERCY HOSP
PONTIAC MI 48053

WILLIAM E HILL MD
534 FRANKLIN RD
PONTIAC MI 48053

C JACK HIPPS MD
17100 W 12 MILE RD
SOUTHFIELD MI 48075

ABEN HOEKMAN MD R
1740 HAMILTON DR RTE 3
PONTIAC MICH 48053

LAWRENCE D HOFFMAN MD
27600 FARMINGTON
FARMINGTON MI 48024

KEITH M HOLMES MD
880 WOODWARD AVE
PONTIAC MI 48053

MELVIN HOPKINS JR MD
900 BALDWIN AVE
PONTIAC MI 48055

WM J HOPKINS MD
17000 W EIGHT MILE RD
SOUTHFIELD MICHIGAN 48075

WILLARD E HOUSE MD
FORD MOTOR CO
P O BOX 235

UTICA MI 48087

MARJORIE E HOWARD MD
5685 PONTIAC LAKE RD
PONTIAC MI 48054

LYNN E HOWELL MD
909 WOODWARD AVE
PONTIAC MICHIGAN 48053

MYROSLAW HRUSHKA MD
PONTIAC STATE HOSP
PONTIAC MI 48053

JOHN J HSU MD
35 WEST HURON ST
PONTIAC MI 48058

JOHN R HUBERT MD
880 WOODWARD AVE
PONTIAC MI 48053

JAMES V HUEBNER MD
287 WINRY
ROCHESTER MI 48063

ARAM A IGNATIUS MD
1915 E NINE MILE RD
FERNDALE MI 48220

H J INCHAUSTEGUI MD
4045 W 13 MILE RD
ROYAL OAK MI 48072

JOHN A INGOLD MD
3535 W 13 MILE RD #608
ROYAL OAK MI 48072

HERBERT L ISAAC MD
909 WOODWARD AVE 115
PONTIAC MI 48053

JOHN W ISON MD
1476 LAKEWOOD DR
BLOOMFIELD HILLS MI 48013

PHILIP J JACKSON MD
6960 POST OAK DR
BIRMINGHAM MI 48010

RODMAN C JACOBI MD
91 S WASHINGTON
OXFORD MICH 48051

HERBERT S JACOBSON MD
20905 GREENFIELD #400
SOUTHFIELD MI 48075

NANETTE JAGNOW MD
525 SOUTHFIELD RD
BIRMINGHAM MICHIGAN 48009

ROBT E JAMES JR MD
2561 ELIZABETH LK RD
PONTIAC MI 48054

THOMAS P JAMES MD
27653 ECHO VALLEY WEST
FARMINGTON MI 48024

HENRY L JENKINS MD
161 STATE ST
PONTIAC MICHIGAN 48053

JEFFERY M JENNINGS MD
200 ELM ST
BIRMINGHAM MI 48008

JOHN A JENNINGS MD
21701 W 11 MILE RD
SOUTHFIELD MICHIGAN 48075

CLARE G JOHNSON MD
909 S WOODWARD AVE
PONTIAC MICHIGAN 48053

GARFIELD JOHNSON JR MD
35 S JOHNSON
PONTIAC MI 48053

J FREDERIC JOHNSON MD
23760 N WOODWARD
PLEASANT RIDGE MICH 48069

JAMES W JOHNSON MD
2581 MCCLINTOCK RD
PONTIAC MI 48053

ROBERT H JOHNSON MD
310 W UNIVERSITY DR
ROCHESTER MI 48063

CYRIL D JONES MD
100 W HICKORY GROVE RD
BLOOMFIELD HILLS MI 48013

ANTOINE L JOSEPH MD
4045 W 13 MILE RD
ROYAL OAK MI 48072

JOHN A JOYCE MD
134 W UNIVERSITY
ROCHESTER MICHIGAN 48063

DONALD B JURY MD
1126 S WOODWARD AVE
ROYAL OAK MICHIGAN 48067

GEORGE KADIAN MD
18211 W 12 MILE RD
LATHRUP VILLAGE MI 48075

ROBERT L KAMM MD
240 DAINES ST
BIRMINGHAM MI 48009

F S KAPADIA MD A
PONTIAC GEN HOSP
PONTIAC MI 48053

MICHAEL KAPRIELAIN MD
189 TOWNSEND #210
BIRMINGHAM MI 48011

RAYMOND J KARAKUC MD
461 W HURON ST RAD
PONTIAC MI 48053

N NACI KARCA MD
5045 CHARING CROSS
BLOOMFIELD HILLS MI 48013

AUSTIN M KATZ MD
140 ELIZABETH LAKE RD
PONTIAC MI 48053

SIDNEY F KATZ MD
1379 STUYVESSANT RD
BIRMINGHAM MI 48010

JACK M KAUFMAN MD
26711 WOODWARD AVE
HUNTINGTON WOODS MI 48070

SHERMAN A KAY MD
26657 WOODWARD AVE
HUNTINGTON WOODS MI 48070

LOUIS L KAZDAN MD
13801 W NINE MILE RD
OAK PARK MI 48237

EUGENE J KEEFFE MD
880 WOODWARD AVE
PONTIAC MI 48053

MAXIMILIAN KELIN MD
3713 ELIZABETH LK RD
PONTIAC MI 48054

ANTHONY S KELLER MD
1705 BEDFORD SQ #102
ROCHESTER MI 48063

FELIX J KEMP MD
880 WOODWARD AVE
PONTIAC MICH 48053

H F KENDRICK JR MD
35 S JOHNSON
PONTIAC MICHIGAN 48053

EDWIN C KERR MD
32749 FRANKLIN RD
FRANKLIN MICHIGAN 48025

JESSE KETCHUM MD
715 DELAWARE AVE
BUFFALO N Y 14209

HANS J KETTLER MD
25160 EDGEMONT RD
SOUTHFIELD MICHIGAN 48075

SATISH C KHANEJA MD
140 ELIZABETH LAKE RD
PONTIAC MI 48053

BAHRAM KHODADADEH MD
4400 ORCHARD LAKE RD
ORCHARD LAKE MI 48033

THEODORE W KILAR MD
31815 SOUTHFIELD RD
BIRMINGHAM MI 48009

GEORGE KINSLEY MD
909 WOODWARD AVE
PONTIAC MICHIGAN 48053

ARTHUR KLASS MD
26657 WOODWARD AVE
HUNTINGTON WOODS MI 48070

JEROME H KLEGMAN MD
17000 W EIGHT MILE RD
SOUTHFIELD MICHIGAN 48075

MARVIN E KLEIN MD
18400 W 12 MILE RD
SOUTHFIELD MI 48075

H A KLEWICKI MD
22720 WOODWARD
FERNDALE MI 48220

EDWIN M KNIGHTS JR MD
16001 9 MILE RD
SOUTHFIELD MICHIGAN 48075

RICHARD S KNOX MD
422 WASHINGTON SQ PL
ROYAL OAK MI 48067

WM H KOEHLER MD
3535 W 13 MILE RD
ROYAL OAK MICHIGAN 48072

KARL F KOERNER MD
1820 CROOKS RD
TROY MI 48084

LAWRENCE KOLTONOW MD
304 NORTHLAND MED BLDG
SOUTHFIELD MICHIGAN 48075

LARRY L KOMPUS MD
500 W HURON ST
PONTIAC MI 48053

JAMES G KORNMESSER MD
27600 FARMINGTON RD
FARMINGTON MICHIGAN 48024

UJAMLAL C KOTHARI MD
PONTIAC STATE HOSP
PONTIAC MI 48053

CLIFFORD S KOZLOW MD
1201 BROOKWOOD
BIRMINGHAM MI 48009

L ANGE KOZLOW MD
3535 W THIRTEEN MI RD
ROYAL OAK MI 48072

MICHAEL C KOZONIS MD
880 WOODWARD AVE
PONTIAC MICHIGAN 48053

ELMER J KOZORA MD
17650 W 12 MILE RD
SOUTHFIELD MICHIGAN 48075

MARK KRANE MD
2335 S COMMERCE RD
WALLED LAKE MI 48088

ALFRED M KREINDLER MD
200 ELM ST
BIRMINGHAM MI 48008

BRUCE A KRESGE MD
1500 WALTON BLVD
ROCHESTER MICHIGAN 48063

NORMAN N KRIEGER MD
402 UNION ST
MILFORD MICHIGAN 48042

DON R KROHN MD
27600 FARMINGTON RD
FARMINGTON MI 48024

HENRY KRYSTAL MD
20905 GREENFIELD RD
SOUTHFIELD MI 48075

ELI H KUHEL MD
25415 SOUTHFIELD RD
SOUTHFIELD MICHIGAN 48075

ANNE K KUHN MD
4203 W 13 MILE RD
ROYAL OAK MICH 48072

ROBT E KUHN MD
4203 W 13 MILE RD
ROYAL OAK MICH 48072

G KRISHNA KUMAR MD
16216 W 13 MILE RD
BIRMINGHAM MI 48009

CARL E KUNTZMAN MD
134 W UNIVERSITY DR
ROCHESTER MI 48063

RUBEN KURNETZ MD
10831 W TEN MILE RD
OAK PARK MICHIGAN 48237

MYRON M LABAN MD
WM BEAUMONT MED BLDG
ROYAL OAK MI 48072

JAMES E LABES MD
15101 W MCNICHOLS RD
DETROIT MI 48235

JAMES E LADD MD
31815 SOUTHFIELD
BIRMINGHAM MICHIGAN 48009

PAUL T LAHTI MD
3600 W 13 MILE RD
ROYAL OAK MICH 48072

ALVIN G LAMBERT MD
3535 W 13 MILE 505
ROYAL OAK MI 48072

FRANCIS W LANARD MD
31504 SUNSET DR
BIRMINGHAM MI 48009

ROY A LANDRY MD
5770 S MAIN ST
CLARKSTON MI 48016

LAWRENCE A LAPORTE MD
356 N CLIFTON RD
BIRMINGHAM MI 48010

ALVIN R LARSON MD
880 WOODWARD AVE
PONTIAC MICH 48053

PHILIP J LAUX JR MD
3027 N WOODWARD
ROYAL OAK MICH 48072

JAMES M LAWSON MD
17100 W 12 MILE RD
SOUTHFIELD MI 48075

ANTONIO A LAXA MD
3329 WEST SHORE
ORCHARD LAKE MI 48033

CHAS A LEACH MD
525 SOUTHFIELD RD
BIRMINGHAM MI 48009

ETTA LINK LEAHY MD R
1616 WILTSHIRE
BERKLEY MI 48072

LEONARD H LERNER MD
26615 GREENFIELD
SOUTHFIELD MI 48075

NASI D LESSANI MD
27600 FARMINGTON RD
FARMINGTON MI 48024

BRUCE T LESSIEN MD
4045 W THIRTEEN MILE
ROYAL OAK MICHIGAN 48072

MURRAY B LEVIN MD
7046 CATHERDRAL DR
BIRMINGHAM MICHIGAN 48010

ALLAN J LEVINE MD
WM BEAUMONT HOSP
3601 W 13 MILE RD

ROYAL OAK MI 48072

BERNARD LEVINE MD
25835 PARKWOOD DR
HUNTINGTON WOODS MI 48070

MARVIN B LEVY MD
23200 WOODWARD AVE
FERNDALE MI 48220

SOL M LEWIS MD L
541 W OAKRIDGE
FERNDALE MI 48220

JOHN H LIBCKE MD
PONTIAC GEN HOSP
PONTIAC MI 48053

HARRY E LICHTWARDT MD
3535 W 13 MILE RD
ROYAL OAK MI 48072

JOHN R LICHTWARDT MD
3535 W 13 MILE RD
ROYAL OAK MI 48072

EDWARD G LIEVOIS MD
289 WESTBOURNE DR
BIRMINGHAM MICH 48010

RICHARD J LILLY MD
25336 CASTLEREIGH
FARMINGTON MICH 48024

DOMINIC LIM MD
PONTIAC STATE HOSP
PONTIAC MI 48053

ANTONIO G LIMIA MD
31815 SOUTHFIELD RD
BIRMINGHAM MI 48009

HENRY Y LIU MD
16001 W NINE MILE RD
SOUTHFIELD MI 48075

HAROLD W LONGYEAR MD
3535 W 13 MILE RD
ROYAL OAK MI 48072

JAMES R LOVELL MD A
3601 W 13 MILE RD
ROYAL OAK MI 48072

JAMES W LOWELL MD
880 WOODWARD AVE
PONTIAC MI 48053

ANTHONY J LOWERY MD R
4966 GEORGETOWN CT
WATERFORD MI 48095

RAY O LUNDY MD A
PONTIAC GEN HOSPITAL
PONTIAC MI 48053

AARON LUPOVITCH MD
6707 EDINBOROUGH
BIRMINGHAM MI 48010

A S LUSSOS MD
2707 BRIDLE RD
BLOOMFIELD HILLS MI 48013

BYRON B LUTES MD
1961 LONG LK SHORE DR
ORCHARD LAKE MI 48033

BLAGOY LUTIKOF MD
4440 ELIZABETH LAKE RD
PONTIAC MI 48054

ROBT T LYONS MD
35 S JOHNSON
PONTIAC MICH 48053

GEORGE S MACKEY MD
3601 W 13 MILE RD
ROYAL OAK MI 48072

B H MACPHERSON MD
880 WOODWARD AVE #111
PONTIAC MI 48053

IVAN J MADER MD
15 ELM PARK
PLEASANT RIDGE MI 48069

DELMAR H MAHRT MD
3601 WEST 13 MILE RD
WM BEAUMONT HOSP

ROYAL OAK MI 48072

HENRY W MAICKI MD
5857 DUNMORE CT
ORCHARD LAKE MI 48033

WM F MALARNEY MD
880 WOODWARD AVE #106
PONTIAC MI 48053

HOWARD N MANZ MD
23023 ORCHARD LAKE RD
FARMINGTON MICHIGAN 48024

OLIVER J MARCOTTE MD R
25000 W TEN MILE RD
SOUTHFIELD MI 48075

R RALPH MARGULIS MD
31815 SOUTHFIELD
BIRMINGHAM MICHIGAN 48009

JOHN M MARKLEY MD
4120 SANDYLANE
BIRMINGHAM MI 48010

SIMON W MAROKO MD
2416 AVONDALE
PONTIAC MI 48053

JOHN J MARRA MD
35 S JOHNSON
PONTIAC MICH 48053

GORDON L MARSA MD A
785 N LAPEER RD
LAKE ORION MI 48035

PERCY S MARSA MD
785 N LAPEER RD
LAKE ORION MICHIGAN 48035

JOSEPH F MARSHALL MD
2056 FOX GLEN CT
BLOOMFIELD HILLS MI 48013

DONALD W MARTIN MD
PONTIAC STATE HOSP
PONTIAC MI 48053

FRANCIS A MARTIN MD
880 WOODWARD
PONTIAC MICH 48053

ROBT J MASON MD L
618 N WOODWARD AVE
BIRMINGHAM MICH 48011

ROBERT T MAST MD
189 TOWNSEND
BIRMINGHAM MI 48011

G R MATHURA MD
212 RIKER BLDG
PONTIAC MICHIGAN 48058

W E BARRY MAYO MD
2338 N WOODWARD AVE
ROYAL OAK MICHIGAN 48073

RAYMOND L MAYOR MD
35 S JOHNSON
PONTIAC MICHIGAN 48053

FRENCH H MC CAIN MD
628 N WOODWARD AVE
BIRMINGHAM MICH 48011

TALMAGE D MCCALLON MD
1307 S WASHINGTON
ROYAL OAK MI 48067

D H MC CANDLISS MD
35 S JOHNSON
PONTIAC MICH 48053

SUE A MCCUTCHEON MD
1100 W UNIVERSITY DR
ROCHESTER MI 48063

ROBERT J MCDONALD MD
4200 N WOODWARD AVE
ROYAL OAK MICHIGAN 48072

WM J MC ELROY JR MD
3415 W 14 MILE RD #11
ROYAL OAK MI 48073

FRANCIS J MC EVOY MD
1715 CROOKS RD
ROYAL OAK MICH 48067

RODNEY MCFARLAND MD
880 WOODWARD AVE #104
PONTIAC MI 48053

DANIEL E MCGUNEGLE MD A
PONTIAC GEN HOSPITAL
PONTIAC MI 48053

JAMES M MC HUGH MD
20905 GREENFIELD RD
SOUTHFIELD MICHIGAN 48075

THOS S MC INERNEY MD
2026 LAUROME
ROYAL OAK MICHIGAN 48073

JACK B MC INTYRE MD
625 PURDY
BIRMINGHAM MICHIGAN 48009

ROY J MCKINNEY MD
3535 W 13 MILE RD
ROYAL OAK MI 48072

J H MC LAUGHLIN MD
604 NORTH WOODWARD
BIRMINGHAM MICHIGAN 48011

HOWARD H MC NEILL MD L
225 W HICKORY GROVE RD
BLOOMFIELD HILLS MI 48013

EDWARD C MC PHEE MD
909 WOODWARD
PONTIAC MICH 48053

MARK C MCQUIGGAN MD
29653 CLUB HOUSE LANE
FARMINGTON MI 48024

PETER P MEDRANO MD
32310 SCHOOLCRAFT
LIVONIA MI 48154

MIHAEL A MEGLER MD
4548 BRIGHTMORE
BLOOMFIELD HILLS MI 48013

CONSTANTINE P MEHAS MD
1060 TRAILWOOD PATH
BIRMINGHAM MICHIGAN 48010

DONALD A MEIER MD
20905 GREENFIELD RD
SOUTHFIELD MI 48075

RICHARD K MEILS MD
310 W UNIVERSITY DR
ROCHESTER MI 48063

HARRY E MEISNER MD
24777 GREENFIELD RD
SOUTHFIELD MI 48075

MICHAEL S MENGE MD
134 W UNIVERSITY DR
ROCHESTER MI 48063

FRANK A MERCER MD L
3333 NE 34TH ST APT615
FORT LAUDERDALE FL 33308

MR M S MERRY ADMIN A
ARDMORE HOSPITAL
814 W NINE MILE RD

FERNDALE MI 48220

ALVIN B MICHAELS MD
18777 W 10 MILE RD
SOUTHFIELD MI 48075

ANIS A MILAD MD
3535 W 13 MILE RD #602
ROYAL OAK MI 48072

FRANKLIN T MILES MD
4631 SHENANDOAH AVE
ALLEN PARK MI 48101

ARTHUR C MILLER MD
31723 WALTHAM CT
BIRMINGHAM MI 48009

HAZEN L MILLER MD L
BOX 237 A
GRAYLING MI 49738

HUBERT MILLER MD
16210 W 9 MILE RD #109
SOUTHFIELD MICHIGAN 48075

IRVING M MILLER MD
23023 ORCHARD LAKE RD
FARMINGTON MICH 48024

SIDNEY MILLER MD
709 TOTTENHAM RD
BIRMINGHAM MI 48008

JAMES T MIMURA MD
31815 SOUTHFIELD
BIRMINGHAM MICH 48009

MOUFID MITRI MD
134 W UNIV DR #103
ROCHESTER MI 48063

R MOHAJER-SHOJAEE MD
481 MILLER
ROCHESTER MI 48063

E D MOJICA MD
140 ELIZABETH LK RD
PONTIAC MI 48053

PABLO A MOJICA MD
140 ELIZABETH LK RD
PONTIAC MI 48053

JAMES C MOLONEY MD N
66 MARIMAR ST
THOUSAND OAKS CA 91360

LEONARD A MORIN MD
29929 VERNON DR
SOUTHFIELD MICHIGAN 48075

ELMER J MUELLER MD
31815 SOUTHFIELD RD
BIRMINGHAM MICHIGAN 48009

CLINTON J MUMBY MD
26789 WOODWARD AVE
HUNTINGTON WDS MICH 48070

BARBARA J MUNSON MD
207 KENILWORTH ST
ROYAL OAK MI 48067

HARRY L MUNSON MD
2335 S COMMERCE RD
WALLED LAKE MI 48088

JAMES R MURPHY MD
433 FOX HILLS DR APT1
BLOOMFIELD HILLS MI 48013

KENNETH W MURRAY MD
31815 SOUTHFIELD RD
BIRMINGHAM MI 48009

GORDON S MUSICK MD
31327 W RUTLAND
BIRMINGHAM MI 48009

EUGENE J NALEPA MD
880 WOODWARD AVE
PONTIAC MICH 48053

MILTON L NATHANSON MD
17000 W 8 MILE RD
SOUTHFIELD MI 48075

JOHN F NAZ MD
2826 ORANGE GROVE
WATERFORD MI 48095

PAUL L NEISWANDER MD
30001 VAN DYKE
WARREN MI 48093

ROGER B NELSON MD
PONTIAC GEN HOSP
PONTIAC MI 48053

JACK H NESSEL MD
880 WOODWARD
PONTIAC MICHIGAN 48053

ROBERT J NETZEL MD
2700 COLONIAL WAY
BLOOMFIELD HILLS MI 48013

BURNS G NEWBY MD
20905 GREENFIELD
SOUTHFIELD MICHIGAN 48075

ARNOLD B NEWCOMB MD
19834 RIVERSIDE DR
BIRMINGHAM MICH 48009

SAMUEL J NICHAMIN M D
20905 GREENFIELD RD
SOUTHFIELD MICHIGAN 48075

IVEY D NICKERSON MD
6245 GOLFVIEW DR
BIRMINGHAM MICH 48010

D C NIEDERLUECKE MD
35 S JOHNSON
PONTIAC MICHIGAN 48053

EDWARD A NOL MD
PONTIAC ST HOSP
PONTIAC MI 48053

JOS I NOSANCHUK MD
35 S JOHNSON
PONTIAC MICHIGAN 48053

ANTONIO S NUCUM MD
5725 TIPPERARY TRAIL
WATERFORD MI 48095

JAMES W NUNN MD
751 CHESTNUT
BIRMINGHAM MICH 48008

CHARLES H O,DONNELL MD
23338 WOODWARD AVE
FERNDALE MI 48220

YOSHIO OKUMURA MD
4715 LORIN DRIVE
UTICA MI 48087

WM W OLIPHANT MD
785 N LAPEER RD
LAKE ORION MICHIGAN 48035

JAMES A O NEILL MD
5790 M 15
CLARKSTON MICHIGAN 48016

DONNA L OPIE MD
32299 GLEN COVE
FARMINGTON MI 48024

JOHN K ORMOND MD L
909 WOODWARD AVE
PONTIAC MI 48053

GIRARDIN S O SULLIVAN
26520 WILLOWGREEN WAY
FRANKLIN MICHIGAN 48025

HAROLD A OTT MD
3019 N WOODWARD AVE
ROYAL OAK MI 48072

DONALD C OVERY
880 WOODWARD AVE
PONTIAC MICHIGAN 48053

VIRGINIA T PACIS MD
PONTIAC STATE HOSP
PONTIAC MI 48053

DAVID C PACKARD MD
5770 HIGHLAND RD
PONTIAC MICHIGAN 48054

HAYDEN D PALMER MD L
35 W HURON ST
PONTIAC MI 48058

JALAL PANAH MD
2696 RED FOX TRAIL
TROY MI 48084

S WILLIAM PARIS MD
23023 ORCHARD LAKE RD
FARMINGTON MICHIGAN 48024

L RAJ S PATIL MD
23023 ORCHARD LAKE RD
FARMINGTON MI 48024

CHAS I PATRICK MD
4721 DIXIE HWY
DRAYTON PLAINS MICH 48020

J C PATTERSON MD
3535 W 13 MILE RD
ROYAL OAK MI 48072

CHAS F PAYTON MD
626 N CROOKS RD
CLAWSON MI 48017

ERWIN G PEAR MD
3027 N WOODWARD AVE
ROYAL OAK MICH 48072

JAMES F PEARCE MD
3535 W 13 MILE RD
ROYAL OAK MICHIGAN 48072

WM H PEIRCE MD
800 S ADAMS RD
BIRMINGHAM MICHIGAN 48011

CHAS J PELLETIER MD
1111 N CAMPBELL
ROYAL OAK MICHIGAN 48067

J S PENSAVECCHIA MD
2680 GARLAND
PONTIAC MICHIGAN 48053

PANAYOTIS PESAROS MD
648 N WOODWARD AVE
BIRMINGHAM MI 48011

EDWARD PETROVICH MD
960 WESTVIEW RD
BLOOMFIELD HILLS MI 48013

JOHN R PFEIFER MD
15901 W 9 MILE RD 600
SOUTHFIELD MI 48075

A D PITONYAK MD
ST JOSEPH MERCY HOSP
PONTIAC MICHIGAN 48053

KENNETH E PITTS MD
6235 MIDDLEBELT
BIRMINGHAM MI 48010

MERLE O PLAGGE MD
4680 DIXIE HIGHWAY
DRAYTON PLAINS MI 48020

ROBERT POOL MD
800 S ADAMS RD
BIRMINGHAM MICH 48011

KENNETH F PORTER MD
2709 BRADWAY BLVD
BIRMINGHAM MICH 48010

LEONARD J PORTNER MD A
WM BEAUMONT HOSP
ROYAL OAK MI 48072

HAROLD D PORTNOY MD
445 W HURON ST
PONTIAC MICHIGAN 48053

WALTER A POZNANSKI MD
1100 N WOODWARD AVE
BIRMINGHAM MICH 48011

BRUCE PROCTOR MD
3431 BALDWIN RD RR4
PONTIAC MICHIGAN 48055

CONRAD A PROCTOR MD
3535 W 13 MILE RD
ROYAL OAK MI 48072

FRANK W PRUST MD
3535 W 13 MILE RD #602
ROYAL OAK MI 48072

ALBERT E QUARTON JR MD
542 PILGRIM RD
BIRMINGHAM MICH 48009

J PATRICK QUIGLEY MD
31815 SOUTHFLD RD #14
BIRMINGHAM MI 48009

JAMES R QUINN JR MD
2070 W VALLEY RD
BLOOMFIELD HILLS MI 48013

IRAJ RAFANI MD
4045 W 13 MILE RD
ROYAL OAK MI 48072

ABNER I RAGINS MD
909 WOODWARD AVE
PONTIAC MICHIGAN 48053

IGNACIO O RAMIREZ MD
3321 ROCHESTER
ROYAL OAK MI 48073

JOAQUIN J RAMIREZ MD
751 CHESTNUT
BIRMINGHAM MICHIGAN 48008

KENNETH I RANNEY MD
3535 W 13 MILE RD
ROYAL OAK MI 48072

SANFORD J RAUTBORT MD
96 BARRINGTON RD
BLOOMFIELD HILLS MI 48013

MARY A RAVIN MD
31237 SLEEPY HOLLOW LN
BIRMINGHAM MI 48010

JAMES A READ MD
610 N WOODWARD
BIRMINGHAM MICHIGAN 48011

WM R RECH MD
2335 S COMMERCE RD
WALLED LAKE MI 48088

ROBERT E REID MD
3535 W 13 MILE RD
ROYAL OAK MI 48072

RICHARD C REILLY MD
909 WOODWARD AVE
PONTIAC MI 48053

N C RENDZIPERIS MD
1100 W UNIVERSITY DR
ROCHESTER MI 48063

CAROLYN REUTTER MD
183 N WILLIAMSBURY
BIRMINGHAM MI 48009

ROBERT E RICHARD MD
626 N CROOKS RD
CLAWSON MI 48017

WILSON P RICHARDS MD
3500 W MAPLE RD
BIRMINGHAM MICHIGAN 48010

ROBT P RICHARDSON MD
26711 WOODWARD
HUNTINGTON WOODS MI 48070

HARRY L RIGGS MD
149 FRANKLIN BLVD
PONTIAC MICH 48053

AARON D RIKER MD L
640 RIKER BLDG
PONTIAC MI 48058

WILLIAM R RISK MD
909 WOODWARD AVE #14
PONTIAC MI 48053

EMILIANO RIVERA JR MD
3495 ROCHESTER RD
TROY MI 48084

BRUCE H ROBINSON MD
15901 W 9 MILE RD
SOUTHFIELD MI 48075

HAROLD RODNER MD
27078 ARDEN PARK CIR
FARMINGTON MI 48024

HAROLD R ROEHM MD L
308 WABEEK BLDG
BIRMINGHAM MI 48011

JOHN H ROMANIK MD
31601 W 13 MILE RD
FARMINGTON MICH 48024

LINO A ROMERO MD
1880 S WOODWARD AVE
BIRMINGHAM MI 48011

ROBERT ROONEY MD
667 KINGSLEY
BLOOMFIELD HILLS MI 48013

GLENN A ROSIN MD
149 S CRNBK CROSS RD
BIRMINGHAM MI 48010

HERBERT W ROSSIN MD
18211 W 12 MILE RD
LATHRUP VILLAGE MI 48075

HERBERT J ROTH MD
17640 W 12 MILE RD
SOUTHFIELD MI 48075

THEODORE L ROUMELL MD
1100 W UNIVERSITY DR
ROCHESTER MI 48063

LAURIE G ROWLEY MD L
10401 NO CAVE CREEK RD
PHOENIX ARIZONA 85020

DONALD E RUESINK MD
127 FERNDALE
ROCHESTER MICHIGAN 48063

EDSON C RUPP MD
3535 W 13 MILE RD
ROYAL OAK MI 48072

DONALD F RUPPRECHT MD
134 W UNIV DR #202
ROCHESTER MI 48063

ALVA D RUSH MD
391 HAMILTON
BIRMINGHAM MICH 48011

DAVID S RUSKIN MD
20905 GREENFIELD RD
SOUTHFIELD MICHIGAN 48075

VINCENT P RUSSELL MD
3535 W 13 MILE RD
ROYAL OAK MI 48072

EDW J RUTKOWSKI MD A
3235 BELLE COURT
ROYAL OAK MI 48072

JULIUS RUTZKY M D
3601 W 13 MILE RD
ROYAL OAK MI 48072

JOS J RUVA MD
4463 DIXIE HWY
DRAYTON PLAINS MICH 48020

MERLE F RYDESKY MD
16001 W 9 MILE RD
SOUTHFIELD MI 48075

NISON SABIN MD
17000 W 8 MILE RD #336
SOUTHFIELD MI 48075

VINCENT J SADOVSKY MD
880 WOODWARD AVE
PONTIAC MICHIGAN 48053

HAROLD A ST JOHN MD L
35 WEST HURON ST
PONTIAC MI 48058

MICHEL I SALIB MD
2928 RAMBLING WAY
BLOOMFIELD HILLS MI 48013

CAROLYN S SALISBURY MD
21580 GREENFIELD
OAK PARK MI 48237

ANNE H SAMBORSKI MD
32600 GRAND RIVER
FARMINGTON MI 48024

NORMAN T SAMET MD
1100 N WOODWARD AVE
BIRMINGHAM MI 48011

MANMOHAN S SANDHU MD
10045 GROH RD RD 39
GROSSE ILE MI 48138

GLENN A SANFORD MD
35 S JOHNSON
PONTIAC MICHIGAN 48053

THOS J SANSONE MD
909 WOODWARD AVE
PONTIAC MICHIGAN 48053

RAJKUMAR L SARDA MD A
PONTIAC GEN HOSP
PONTIAC MI 48053

USHA R SARDA MD A
PONTIAC GENERAL HOSP
PONTIAC MI 48053

THEODORE SATERSMOEN MD
6405 TELEGRAPH #41
BIRMINGHAM MI 48010

WM C SCHAEFER MD
17330 SCHAEFER HWY
DETROIT MI 48235

JOS L SCHIRLE JR MD
1116 VOORHEIS RD
PONTIAC MICH 48053

JEROME J SCHNEYER MD
25000 W TEN MILE RD
SOUTHFIELD MICHIGAN 48075

ROBT J SCHOENFELD MD
800 S ADAMS RD
BIRMINGHAM MICH 48011

CANL R SCHOLES MD
3535 W 13 MILE RD
ROYAL OAK MI 48072

LEONARD SCHREIER MD
909 S WOODWARD AVE
PONTIAC MI 48053

HOWARD A SCHUNEMAN MD
23760 WOODWARD AVE
PLEASANT RIDGE MICH 48069

DAVID SCHWARTZ MD A
33120 W TWELVE MILE
FARMINGTON MICHIGAN 48024

OSCAR D SCHWARTZ MD
15901 W 9 MILE RD #620
SOUTHFIELD MI 48075

S SCHWEINSBERG MD
4117 SUNNINGDALE DR
BLOOMFIELD HILLS MI 48013

ARTHUR J SEABORN MD R
885 N WOODWARD AVE
BIRMINGHAM MI 48009

ROBT L SEGULA MD
35 S JOHNSON
PONTIAC MICHIGAN 48053

ROBERT SELMAN MD
500 W HURON ST
PONTIAC MICHIGAN 48053

CHAS R SEMPERE MD
35 S JOHNSON
PONTIAC MICH 48053

SMAIL B SENDI MD
140 ELIZABETH LAKE RD
PONTIAC MI 48053

GEO R SEWELL MD
411 WEST TEN MILE RD
PLEASANT RIDGE MICH 48069

MAXWELL L SHADLEY MD
94 OTTAWA DR
PONTIAC MICH 48053

JEROLD W SHAGRIN MD
28032 SELKIRK
SOUTHFIELD MI 48075

LOREN C SHEFFIELD MD L
617 S W ELM TREE LN
BOCA RATON FL 33432

WARREN E SHELDEN MD
21721 W 11 MILE RD
SOUTHFIELD MI 48075

F MICHAEL SHERIDAN MD
1307 S WASHINGTON ST
ROYAL OAK MICH 48067

HENRY A SHEVITZ MD A
WM BEAUMONT HOSP
ROYAL OAK MI 48072

EON SHIN MD
1100 W UNIVERSITY DR
ROCHESTER MI 48063

MARVIN D SIEGEL MD
1095 W HURON ST
PONTIAC MICHIGAN 48053

PETER SIEGEL MD
880 WOODWARD AVE
PONTIAC MI 48053

SHELDON N SIEGEL MD
18239 WEST 12 MILE RD
LATHRUP VILLAGE MI 48075

LOREN W SIFFRING MD
427 W UNIVERSITY
ROCHESTER MICHIGAN 48063

JOEL J SILBERG MD
16300 GREENFIELD RD
DETROIT MI 48235

WILLIAM G SILLS MD
1223 S WASHINGTON
ROYAL OAK MI 48067

JOHN SILVANI MD
909 WOODWARD AVE
PONTIAC MICHIGAN 48053

MARVIN D SILVER MD
3535 W 13 MILE RD
ROYAL OAK MI 48072

EDWARD K SIMPSON MD L
2 SUNSET AVENUE
CHATHAM ONT CANADA

JOHN R SIMPSON MD
200 ELM ST
BIRMINGHAM MI 48008

ROBERT B SKLAR MD
3535 W 13 MILE RD #304
ROYAL OAK MI 48072

CARLETON A SMITH MD
880 WOODWARD AVE
PONTIAC MICHIGAN 48053

DONALD S SMITH MD
1010 RIKER BLDG
PONTIAC MICHIGAN 48058

GEO E SMITH MD
3535 W 13 MILE RD
ROYAL OAK MICHIGAN 48072

ALLEN R SOBLE MD
17000 W 8 MILE RD
SOUTHFIELD MI 48075

M Z SOKOLOWSKI MD
3721 MILLSPRING
BLOOMFIELD HILLS MI 48013

WM J SOMERVILLE MD
3535 W 13 MILE RD 308
ROYAL OAK MI 48072

ALLEN SOSIN MD
23023 ORCHARD LAKE RD
FARMINGTON MICHIGAN 48024

MARY A SOULE MD
166 NO GLENHURST
BIRMINGHAM MI 48009

LOREN C SPADEMAN MD L
3535 W 13 MILE RD
ROYAL OAK MI 48072

LLOYD H SPENCER MD L
1219 S WASHINGTON AVE
ROYAL OAK MICH 48067

HENRY J SPIRO MD
27046 PIERCE
SOUTHFIELD MI 48075

EUGENE L SPOEHR MD
22832 WOODWARD AVE
FERNDALE MI 48220

EARLE W SPOHN MD
324 WASHINGTON SQ PL
ROYAL OAK MI 48067

JOHN C STAGEMAN MD
909 WOODWARD
PONTIAC MICHIGAN 48053

S STANISAVLJEVIC MD
2338 WOODWARD AVE
ROYAL OAK MICHIGAN 48073

REGINALDO STANLEY MD
2828 CHARTER BLVD
TROY MI 48084

WM F STANLEY MD
1148 S WOODWARD
ROYAL OAK MICH 48067

MARVIN L STARMAN MD
21701 W 11 MILE RD #10
SOUTHFIELD MI 48075

ROBERT D STEELE JR MD A
5860 SHAUN RD
ORCHARD LAKE MI 48033

EVERETTE M STEFFES MD
3345 COOLIDGE HIGHWAY
BERKLEY MICH 48072

W H STEPHENS JR MD
189 TOWNSEND
BIRMINGHAM MI 48011

SHELDON D STERN MD
802 MUTUAL BLDG
DETROIT MI 48226

MILAN STOJANOVIC MD
3535 W 13 MILE RD
ROYAL OAK MI 48072

A KENNETH STOLPMAN MD
640 N WOODWARD
BIRMINGHAM MICH 48011

JON L STOLTE MD A
36 CHARLES LANE
PONTIAC MI 48053

DAVID Q STONE MD
WIXOM ASSEMBLY PLANT
PO BOX 1

WIXOM MI 48096

JOHN M STONE MD
1665 TWELVE MILE RD
BERKLEY MI 48072

BERNARD J STREMLER MD
1460 CHESTERFIELD
BIRMINGHAM MICHIGAN 48009

MILTON B STUECHELI MD
1084 WILLOW LANE
BIRMINGHAM MICH 48009

PALMER E SUTTON MD L
1413 ORMSBY DR
SUNNYVALE CA 94087

WM H SWARTZ MD
2335 SO COMMERCE RD
WALLED LAKE MI 48088

WILLIAM C SWATEK MD
900 WOODWARD AVE
PONTIAC MI 48053

NORMAN E SWINGLE MD
1775 E 14 MILE RD
BIRMINGHAM MICH 48008

BELA J SZAPPANYOS MD
3325 BURNING BUSH RD
BIRMINGHAM MI 48010

ELAINE HARTJE TAN MD
1800 CAMPUS COURT
ROCHESTER MI 48063

KING L TAN MD
134 W UNIV DR #301
ROCHESTER MI 48063

THIAN LAI TAN MD
805 SPARTAN
ROCHESTER MI 48063

ANTOINETTE TANAY MD
114 S LAFAYETTE
ROYAL OAK MI 48067

DICK A TARPINIAN MD
3535 W 13 MILE RD
ROYAL OAK MICHIGAN 48072

ABRAHAM TAUBER MD
500 W HURON ST
PONTIAC MICHIGAN 48053

JOHN Y TESHIMA M D
3535 W 13 MILE RD
ROYAL OAK MI 48072

D EUGENE THOMPSON MD
611 CHESTERFIELD
BIRMINGHAM MI 48009

ALLAN K THORBURN MD
231 S WOODWARD
BIRMINGHAM MI 48011

ROBERT R THRELKELD MD
3535 W 13 MILE RD
ROYAL OAK MI 48072

THOMAS D TIERNEY MD
450 N WOODWARD
BIRMINGHAM MICHIGAN 48011

GERALD C TIMMIS MD
3535 W 13 MILE RD
ROYAL OAK MI 48072

THOS S TORGERSON MD
751 CHESTNUT
BIRMINGHAM MICH 48008

ALFRED TOUMA MD
26789 WOODWARD AVE
HUNTINGTON WDS MICH 48070

KENNETH N TRADER MD
15901 W 9 MILE RD #720
SOUTHFIELD MI 48075

WM K TREGENZA MD
20905 GREENFIELD
SOUTHFIELD MICHIGAN 48075

RAYMOND L TREMBLAY MD
2370 WALTON BLVD
ROCHESTER MI 48063

MARIANNE TRENT MD
1901 SOMERSET BLVD#102
TROY MI 48084

DONALD J TRUMPOUR MD
461 W HURON ST
PONTIAC GEN HOSP

PONTIAC MI 48053

GEORGE TSIATALAS MD
4045 W 13 MILE RD
ROYAL OAK MICHIGAN 48072

CONSTANCE J TUBBS MD
15901 W 9 MILE RD
SOUTHFIELD MI 48075

ROBERT L TUPPER MD
86 OTTAWA DR
PONTIAC MICHIGAN 48053

ISMAIL UCAR MD
PONTIAC STATE HOSP
PONTIAC MI 48053

ATTILA O ULGENALP MD
909 WOODWARD AVE
PONTIAC MI 48053

A S ULLMANN MD
1101 W UNIVERSITY DR
ROCHESTER MI 48063

ROBERT A ULVELING MD
500 W HURON ST
PONTIAC MICHIGAN 48053

ROBERT S UNDERHILL MD
26789 WOODWARD AVE
HUNTINGTON WOODS MI 48070

K L URWILLER MD
909 WOODWARD AVE
PONTIAC MICHIGAN 48053

JOHN H VAN DE LEUV MD
91 S WASHINGTON ST
OXFORD MICHIGAN 48051

KENNETH VANDEN BERG MD
35 S JOHNSON
PONTIAC MICH 48053

SEYMOUR A VANDER M D
20905 GREENFIELD RD
SOUTHFIELD MI 48075

JAY J VAN ZOEREN MD
937 ROCK SPRING RD
BLOOMFIELD HILLS MI 48013

THOS G VARBEDIAN MD
195 W BROWN ST
BIRMINGHAM MICHIGAN 48011

RICHARD K VAUGHT MD
2009 CROOKS RD
ROYAL OAK MICH 48073

V P VELUSWAMY MD
PONTIAC STATE HOSP
PONTIAC MI 48053

M A VICTORIA MD
PONTIAC STATE HOSP
PONTIAC MICH 48053

WM F VON VALTIER MD
134 W UNIV DR RM 102
ROCHESTER MI 48063

NIELS R WAEHNELDT MD
4755 DOVER CT
BLOOMFIELD HILLS MI 48013

DOUGLAS L WAKE MD
1406 WOODSBORO
ROYAL OAK MICHIGAN 48067

DONALD B WALLACE MD
909 WOODWARD AVE #118
PONTIAC MICHIGAN 48053

ERWIN N WALLACK MD
15660 W TEN MILE RD
SOUTHFIELD MICHIGAN 48075

HOWARD C WALSER MD R
1300 NORTHLAWN
BIRMINGHAM MI 48009

WILLIAM F WANGNER M D
1401 S WASHINGTON
ROYAL OAK MICH 48067

W PAUL WARD MD
3535 W 13 MILE RD
ROYAL OAK MI 48072

FREDK H O WARNER MD
3400 SASHABAW RD
DRAYTON PLAINS MICH 48020

J E WASHINGTON JR MD A
900 WOODWARD AVE
PONTIAC MI 48053

THOS Y WATSON MD
640 N WOODWARD
BIRMINGHAM MICH 48011

WILLIAM F WEAVER MD
33750 FREEDOM RD
FARMINGTON MI 48024

LYNN F WEBBER MD R
461 COLONIAL CT
GROSSE PTE MI 48236

J DOPNER WEBSTER MD
22000 GREENFIELD RD
OAK PARK MI 48237

MARVIN S WECKSTEIN MD
28290 TAVISTOCK TRAIL
SOUTHFIELD MI 48075

GEORGE C WEGRZYN MD
1380 BROOKWOOD
BIRMINGHAM MICHIGAN 48009

JOEL E WEINGARTEN MD
18905 CARMONA
SOUTHFIELD MI 48075

G S WEINTRAUB MD
3535 W 13 MILE RD 305
ROYAL OAK MI 48072

ROSALYN H WEINTRAUB MD A
6990 HOLIDAY DRIVE
BIRMINGHAM MI 48010

LAWRENCE S WEISMAN MD
28780 JOHN R
MADISON HGTS MI 48071

MORRIS WEISS MD
26339 WOODWARD AVE
HUNTINGTON WOODS MI 48070

DIETER WENDLING MD
31815 SOUTHFIELD RD
BIRMINGHAM MICHIGAN 48009

ROBT R WESSELS MD
302 WABEEK BLDG
BIRMINGHAM MICHIGAN 48011

EDWIN J WESTFALL MD
3535 W 13 MILE RD
ROYAL OAK MICHIGAN 48072

WM J WESTMAAS MD
134 JAIKINS BLDG
1100 N WOODWARD AVE

BIRMINGHAM MI 48011

DANIEL B WHITE MD
134 W UNIV DR #309
ROCHESTER MI 48063

ROBERT H WHITE MD
384 HAMILTON AVE
BIRMINGHAM MICHIGAN 48011

JOHN L WIANT MD
6405 TELEGRAPH RD
BUILDING C
SUITE 2
BIRMINGHAM MI 48010

RALPH D WIGENT MD
PONT MOTOR GLENWOOD AV
PONTIAC MI 48053

WM C WILKINSON MD
880 WOODWARD AVE
PONTIAC MICHIGAN 48053

JOHN P WILLIAMS MD
35 S JOHNSON
PONTIAC MICHIGAN 48053

MAURICE E WILLIS MD
500 W HURON ST
PONTIAC MICHIGAN 48053

GARY E WILSON MD
909 WOODWARD AVE #122
PONTIAC MI 48053

V WINKLER-PRINS MD
4256 ORCHARD LK RD
ORCHARD LAKE MI 48033

E M WISNIEWSKI MD
550 E MAPLE
BIRMINGHAM MI 48011

WARREN E WOLFE MD
6290 WING LAKE RD
BIRMINGHAM MI 48010

WARREN A WOOD JR MD
3535 W 13 MILE RD
ROYAL OAK MI 48072

CHARLES J WOODS MD A
WM BEAUMONT HOSPITAL
3601 W 13 MILE RD

ROYAL OAK MI 48072

HANNA L WOODWARD MD
3856 NORMANWOOD
ORCHARD LAKE MI 48033

ROBERT D WOODWARD MD
1100 N WOODWARD AVE
BIRMINGHAM MICH 48011

VELDORA C YESKO MD
1148 S WOODWARD AVE
ROYAL OAK MI 48064

JOHN R YLVISAKER MD
ST JOSEPH MERCY HOSP
PONTIAC MI 48053

DAVID B YOUEL MD
35 S JOHNSON ST
PONTIAC MI 48053

ARTHUR R YOUNG MD L
35 W HURON ST
PONTIAC MI 48058

FRANK A YOUNG MD
134 W UNIVERSITY DR
ROCHESTER MI 48063

RICARDO A YUZON MD
140 ELIZABETH LK RD
PONTIAC MI 48053

WALTER J ZIMMERMAN MD
32340 SYLVAN LANE
BIRMINGHAM MICHIGAN 48009

J J ZINTERHOFER MD
17187 SCHAEFER
DETROIT MI 48235

ALPHONSE J ZUJKO MD
606 RIKER BLDG
PONTIAC MICHIGAN 48058

OCEANA

V D BARKER MD
601 E MAIN ST
HART MICHIGAN 49420

LINFORD J DAVIS M D
601 E MAIN ST
HART MICHIGAN 49420

DEAN A GERIG DO
218 N MICHIGAN AVE
SHELBY MI 49455

WILLIS A HASTY MD
204 N MICHIGAN
SHELBY MICH 49455

C A JOHNSON MD
P O BOX 6
NEW ERA MICHIGAN 49446

WARREN R MULLEN MD

PENTWATER MI 49449

JOHN J VRBANAC MD
601 E MAIN ST
HART MICHIGAN 49420

MERLE G WOOD MD R
178 N MEARS ST
PENTWATER MI 49449

ONTONAGON

DONALD H ARCHIBALD MD
BOX 223
ONTONAGON MICH 49953

KARL E HILL MD
9 HEMLOCK ST
WHITE PINE MI 49971

CARL R LAHTI MD
R 2
ONTONAGON MICH 49953

JOHN PIERPONT MD
141 MAPLE
WHITE PINE MICHIGAN 49971

JAMES P STRONG MD
R 1 BOX 406
ONTONAGON MI 49953

OTTAWA

ROBT ALBERS MD
601 MICHIGAN
HOLLAND MICHIGAN 49423

WM ARENDSHORST MD
144 WEST 26TH ST
HOLLAND MI 49423

WM C BAUM M D
601 MICHIGAN
HOLLAND MI 49423

DIRK C BLOEMENDAAL MD L
38 S STATE ST
ZEELAND MI 49464

W B BLOEMENDAL MD A
411 WOODLAWN
GRAND HAVEN MI 49417

VERNON L BOERSMA MD
121 W 24 ST
HOLLAND MICH 49423

ALVIN BONZELAAR MD
144 WEST 26TH
HOLLAND MICHIGAN 49423

PHILLIP BRADFORD MD
87 W 24TH
HOLLAND MI 49423

JERRY E BULTHUIS MD

JAMESTOWN MI 49427

JAMES K CHAMNESS MD
121 W 24 TH STREET
HOLLAND MICHIGAN 49423

NELSON H CLARK MD
17 W 10 ST
HOLLAND MICH 49423

CARL S COOK MD
121 W 24TH ST
HOLLAND MICH 49423

BERNADINE DEVALOIS MD
766 W 24TH ST
HOLLAND MI 49423

HAROLD G DE VRIES MD
30 E 9TH ST
HOLLAND MICH 49423

PETER J DE VRIES MD
321 WASHINGTON
GRAND HAVEN MI 49417

DONALD E DE WITT MD
390 FAIRHILL DR
HOLLAND MICHIGAN 49423

FREDK W DE YOUNG MD

SPRING LAKE MI 49456

ARNOLD R DOOD MD
598 CENTRAL AVE
HOLLAND MICHIGAN 49423

PAUL DYKEMA MD
788 COLUMBIA AVE
HOLLAND MI 49423

JEROME H DYKSTRA MD
680 S WASHINGTON
HOLLAND MICHIGAN 49423

DONALD H ENDEAN MD
121 WEST 24TH ST
HOLLAND MICHIGAN 49423

MELVIN J FRIESWYK MD
241 E MAIN ST
ZEELAND MICH 49464

OWEN J GESINK MD
492 ORCHARD HILL
HOLLAND MICHIGAN 49423

FRANK L GROAT MD
631 FRANKLIN ST
GRAND HAVEN MICHIGAN 49417

RALPH HAGER MD
3593 VAN BUREN ST
HUDSONVILLE MI 49426

MARINUS H HAMELINK MD
700 W 26TH ST
HOLLAND MICH 49423

HERMAN P HARMS MD
17 W 10TH ST
HOLLAND MICH 49423

DENNIS W HARVEY MD
309 TERRILL
GRAND HAVEN MI 49417

WM HEARD MD R
504 PARK ST
GRAND HAVEN MI 49417

EDW J HELBING JR MD
17 W 10TH STREET
HOLLAND MI 49423

JACK A HENDERSON MD
1310 WISCONSIN AVE
GRAND HAVEN MICHIGAN 49417

H J HOMMERSON MD A
3559 M40
HAMILTON MICHIGAN 49419

JOS B KEARNEY MD
121 W 24 ST
HOLLAND MI 49423

GERRIT J KEMME MD
R NO 3
ZEELAND MICH 49464

JOHN H KITCHEL MD
414 FRANKLIN ST
GRAND HAVEN MICH 49417

MARY F S KITCHEL MD
P O BOX 521
GRAND HAVEN MI 49417

WM C KOOLS MD L
194 W 11TH ST
HOLLAND MICH 49423

STEVEN KORPI MD
520 OTTAWA AVE
GRAND HAVEN MICHIGAN 49417

SIEBE W KUIPERS MD
144 W 26TH ST
HOLLAND MICH 49423

DERICK J LENTERS MD
121 WEST 24TH ST
HOLLAND MI 49423

RICHARD A LEPPINK MD
601 MICHIGAN
HOLLAND MICHIGAN 49423

ROBERT C MAHANEY MD
601 MICHIGAN AVE
HOLLAND MI 49423

PETER A MC ARTHUR MD
1310 WISCONSIN
GRAND HAVEN MICHIGAN 49417

BERNARD MEEUWSEN M D
601 MICHIGAN AVE
HOLLAND MI 49423

WM J MOERDYK MD L
120 W 14TH ST
HOLLAND MI 49423

RUSSEL R NYKAMP MD R
111 E MAIN ST
ZEELAND MICH 49464

PHILLIP L PARKER MD
1181 UNIVISTA DR
HOLLAND MI 49423

J JAY POST MD

ALLENDALE MI 49401

M GARY ROBERTSON MD
1310 WISCONSIN AVE
GRAND HAVEN MI 49417

WM ROTTSCHAEFER MD
601 MICHIGAN
HOLLAND MICH 49423

LLOYD ROTZ MD
575 ROBBINS RD
GRAND HAVEN MICHIGAN 49417

WILLARD M RYPKEMA MD
22 SOUTH 2ND STREET
GRAND HAVEN MICH 49417

R H SCHAFTENAAR MD
86 E 28TH ST
HOLLAND MICH 49423

DONALD E SIKKEMA MD
1310 WISCONSIN
GRAND HAVEN MI 49417

JAMES M SIMPSON MD
1310 WISCONSIN AVE
GRAND HAVEN MI 49417

GEORGE J SMIT MD
601 MICHIGAN AVE
HOLLAND MI 49423

ROBT H STOBBELAAR MD
1310 WISCONSIN
GRAND HAVEN MICH 49417

RALPH TEN HAVE MD L
1030 ORCHARD
GRAND HAVEN MI 49417

HENRY W TEN PAS MD
110 W 22ND ST
HOLLAND MICH 49423

EUGENE C TIMMERMAN MD

COOPERSVILLE MI 49404

THOMAS W TOWNSEND MD
1310 WISCONSIN AVE
GRAND HAVEN MI 49417

EDWIN E VANDER BERG MD R
69 W 14TH ST
HOLLAND MI 49423

OTTO VAN DER VELDE MD L
33 W 8TH ST
HOLLAND MI 49423

ALFRED J VANDE WAA MD
152 E CHERRY ST
ZEELAND MI 49464

P J VAN KOLKEN MD
11288 LAKESHORE DR
GRAND HAVEN MI 49417

CARL E VAN KRIMPEN MD
601 MICHIGAN AVE
HOLLAND MICHIGAN 49423

BERNARD M VEENSTRA MD

GRAND HAVEN MICH 49417

JOHN W VER DUIN MD A
1618 GLADYS AVE
GRAND HAVEN MI 49417

PETER J VERKAIK MD

HUDSONVILLE MICH 49426

CHARLES WANG MD
14 EAST 25TH STREET
HOLLAND MICHIGAN 49423

JEROME H WASSINK MD
34 E 33RD
HOLLAND MICHIGAN 49423

R L WEELDREYER MD
121 WEST 24TH ST
HOLLAND MI 49423

FLOYD WESTENDORP MD
363 VAN ROLTE
HOLLAND MI 49423

WARREN K WESTRATE MD
17 W 10TH ST
HOLLAND MICH 49423

WM WESTRATE JR MD
17 W 10TH ST
HOLLAND MICH 49423

WM WESTRATE SR MD L
17 W 10TH ST
HOLLAND MI 49423

JOHN K WINTER MD
726 STATE ST
HOLLAND MICH 49423

WM G WINTER JR MD
655 COLLEGE AVE
HOLLAND MICH 49423

JOHN H YFF MD
430 W LAWRENCE
ZEELAND MICHIGAN 49464

FREDK F YONKMAN MD
80 CONVERSE RD
MARION MASS 02738

ATAOLLAH ZAHED MD
39 E MAIN ST
ZEELAND MI 49464

BENJAMIN ZANDSTRA DO O
3337 VAN BUREN ST
HUDSONVILLE MI 49426

SAGINAW

GERALD L ACKERMAN MD R
4700 PINE HAVEN DR
SAGINAW MICH 48603

MILLARD J ALBERS MD
1227 N MICHIGAN AVE
SAGINAW MICH 48602

WM K ANDERSON MD L
182 AMBROSE LN NW
PORT CHARLOTTE FL 33950

ROBT G APP MD
3422 DAVENPORT
SAGINAW MICHIGAN 48602

JOSEPH N AQUILINA MD
3406 DAVENPORT
SAGINAW MI 48602

GEORGE C ARNAS MD
1600 N MICHIGAN AVE
SAGINAW MI 48602

WALTER C AVERILL MD
2110 MORSON
SAGINAW MICHIGAN 48602

EDGAR P BALCUEUA MD
3614 DAVENPORT
SAGINAW MI 48602

JACK L BARRY MD
5670 DIXIE HWY
SAGINAW MI 48601

LEROY C BARRY MD
705 ADAMS ST
SAGINAW MI 48602

VERNON V BASS MD
3322 DAVENPORT
SAGINAW MICH 48602

C PETER BEHME MD
5160 HELGA DR
SAGINAW MICHIGAN 48603

MICHAEL T BERGEON MD
2115 BAY ST
SAGINAW MI 48602

MARC G BERTRAND MD
1311 N MICHIGAN AVE
SAGINAW MICHIGAN 48602

HARRY M BISHOP MD R
4810 CENTENNIAL DR
SAGINAW MI 48603

LELAND M BITNER MD
1705 COURT
SAGINAW MI 48602

WILLIAM A BOW MD
4987 STATE STREET
SAGINAW MICHIGAN 48603

EDWARD BRADLEY MD
4981 SHATTUCK RD
SAGINAW MI 48603

FRIEDRICH P BRENDER MD

FRANKENMUTH MI 48734

GORDON BRIGGS MD
350 W WASHINGTON
HEMLOCK MICHIGAN 48626

LAURENCE BRUGGERS MD
1703 N MICHIGAN AVE
SAGINAW MICH 48602

BERT M BULLINGTON MD
2000 COURT ST
SAGINAW MICH 48602

QUINTER M BURNETT MD
4385 CONCORD
SAGINAW MICH 48603

FRANK J BUSCH MD
1731 N MICHIGAN ST
SAGINAW MICH 48602

MILTON G BUTLER MD
1600 N MICHIGAN AVE
SAGINAW MICH 48602

DONATO CABRERA JR MD
1520 N MICHIGAN AVE
SAGINAW MI 48602

DONALD J CADY MD
2002 COURT ST
SAGINAW MICH 48602

FREDK J CADY JR MD
402 S JEFFERSON AVE
SAGINAW MICH 48607

V W CAMBRIDGE MD
POTTER AT JEFFERSON
SAGINAW MICH 48607

ALLAN K CAMERON MD
1314 S JEFFERSON AVE
SAGINAW MICH 48601

LLOYD A CAMPBELL MD R
335 BROCKWAY PL
SAGINAW MI 48602

FRANCISCO P CARREON MD
1600 N MICH AVE #308
SAGINAW MI 48604

HUGH T CAUMARTIN MD
1537 S WASHINGTON AVE
SAGINAW MICH 48601

PETER R CHISENA MD
6221 DIXIE
BRIDGEPORT MICH 48722

FRANCES S CHOATE MD
1600 N MICHIGAN
SAGINAW MICHIGAN 48602

ROBERT A CLOWATER MD
SAGINAW CO HOSPITAL SA
GINAW MI 48605

VITAL E CORTOPASSI MD
324 S WASHINGTON AVE
SAGINAW MICH 48607

CHAS W CORY MD
1227 N MICHIGAN
SAGINAW MI 48602

T A CRESSWELL MD
1236 N MICHIGAN
SAGINAW MICH 48602

GEO CULLEN MD A
2529 N CLINTON ST
SAGINAW MI 48602

JAMES H CURTS MD
1205 N MICHIGAN AVE
SAGINAW MICH 48602

CLYDE P DAVENPORT MD
2110 MORSON
SAGINAW MICHIGAN 48602

R S DERIFIELD MD A
25 BRETTON CT
SAGINAW MI 48602

WILLIAM A DEYOUNG MD
CENTRAL LABORATORIES
1100 S WASHINGTON

SAGINAW MI 48601

RAYMOND W DOWIDAT MD A
608 WESTFIELD
SAGINAW MI 48602

DONALD C DURMAN MD R
716 GRANADA AVE
VENICE FLORIDA 33595

GEORGE A ELLIS MD
16 E HANNUM BLVD
SAGINAW MI 48602

CECIL W ELY MD L
1820 JANES AVE
SAGINAW MICH 48601

ALBERT W FARLEY MD
1013 N MICHIGAN
SAGINAW MI 48602

ROBERT D FEEHELEY MD A
3521 STATE
SAGINAW MI 48602

E MALCOLM FIELD MD
1013 N MICHIGAN
SAGINAW MICHIGAN 48602

JOHN E FINGER MD
29 BRIAN SCOTT PLACE
SAGINAW MICHIGAN 48602

THOS E FLESCHNER MD R
951 79TH AVE #320
ST PETERSBURG FL 33702

FREDERICK W FOLTZ MD
1703 N MICHIGAN
SAGINAW MI 48602

KENNETH J FORSTER MD
27 BENTON RD
SAGINAW MICHIGAN 48602

JOE H GARDNER MD
815 N MICHIGAN AVE
SAGINAW MICH 48602

ROY J GERARD MD
2419 MACKINAW
SAGINAW MICHIGAN 48602

ROBT D GILMORE MD
234 W SAGINAW
MERRILL MICH 48637

RICHARD D GOLDNER M D
1024 N MICHIGAN
SAGINAW MICH 48602

LOUIS D GOMON MD
1203 N MICHIGAN AVE
SAGINAW MICH 48602

JOHN O GOODSELL MD
1600 N MICHIGAN
SAGINAW MICHIGAN 48602

J ORTON GOODSELL DDS A
1305 S OCEAN BLVD
POMPANO BEACH FL 33062

JACK E GOODWIN MD
1600 N MICH AVE #301
SAGINAW MICH 48602

MICHAEL GRANT MD
101 MARCY
ST CHARLES MI 48655

BETTY LOU GRUNDY MD
4725 CENTURY DR
SAGINAW MI 48603

GEORGE J GUGINO MD
1941 GATE ST
REESE MI 48757

REBII M HANKAN MD
3340 HOSPITAL RD
SAGINAW MI 48603

GEO P HARRIS MD
4346 ELMHURST ST
SAGINAW MI 48603

RICHARD C HAUSLER MD
206 S WEBSTER
SAGINAW MI 48602

ROBT M HEAVENRICH MD
1107 GRATIOT AVE
SAGINAW MICH 48602

DUANE B HEILBRONN MD
1703 N MICHIGAN
SAGINAW MICHIGAN 48602

E C HEINMILLER MD
SAGINAW GEN HOSPITAL
SAGINAW MI 48605

HERBERT O HELMKAMP MD
333 S JEFFERSON
SAGINAW MI 48607

VALERIANO D HEREZA MD
2125 BAY STREET
SAGINAW MICHIGAN 48602

MARY HERLIHY MD
101 MARCY
ST CHARLES MI 48655

RICHARD P HEUSCHELE MD
1909 COOLIDGE ST
SAGINAW MI 48603

VICTOR HILL JR MD
1703 N MICHIGAN AVE
SAGINAW MICHIGAN 48602

RONALD G HINES MD
ST MARYS HOSPITAL
SAGINAW MI 48605

H L HUBINGER DDS A
501 2ND NATL BNK BLDG
SAGINAW MICHIGAN 48607

HENRY R HUG MD
1731 N MICHIGAN
SAGINAW MI 48602

MAURICE E HUNT MD
5000 MAPLE ST
FAIRGROVE MI 48733

WM T HYSLOP MD
1610 GRATIOT AVE
SAGINAW MICH 48602

JOHN W JAMES MD
1021 W GENESEE ST
SAGINAW MI 48607

ROBERT JARDINICO MD
3 CENTER WOODS
SAGINAW MICHIGAN 48603

RUDOLPH M JARVI MD
1107 GRATIOT AVE
SAGINAW MICH 48602

KERMIT T JOHNSTONE MD
1050 FISHER DR
SAGINAW MICH 48601

WM B KERR MD
300 S MICHIGAN ST
SAGINAW MICH 48602

VICTOR W KERSHUL MD
4343 STATE
SAGINAW MI 48603

JAMES T KEYES MD
10222 MAPLE RD
BIRCH RUN MICH 48415

EDWARD F KICKHAM MD
705 ADAMS ST
SAGINAW MICH 48602

HERBERT G KLEEKAMP MD R
1776 S ROGERS RD R 1
CLARE MI 48617

EARL E KLEINSCHMIDT MD
3625 WEBBER ST
SAGINAW MICH 48601

CHARLES N KOENIG MD
3521 STATE ST
SAGINAW MI 48602

ROBT C KOLESAR MD
1005 GRATIOT
SAGINAW MICH 48602

CHARLES J KOUCKY MD
14 CENTER WOODS
SAGINAW MI 48603

FRANCIS V KOWALS MD R
MED DIR CHEC SER GMC
SAGINAW MI 48603

JOHN A KREMSKI MD
1100 S WASHINGTON
SAGINAW MI 48601

THOS V KRETSCHMER MD
1232 N MICHIGAN AVE
SAGINAW MICHIGAN 48602

H F LABSAN MD
1115 COURT
SAGINAW MI 48602

JULES C LASSIGNAL MD
1587 DELTA DRIVE
SAGINAW MICH 48603

F C LEPPERD JR MD A
1500 WEISS ST
SAGINAW MI 48602

TECK S LIAN MD
518 ELEANOR AVE
SAGINAW MI 48602

KENNETH C LING MD

HEMLOCK MI 48626

ROBERT L LOFTIN MD
1501 N MICHIGAN
SAGINAW MI 48602

THOS O LOHR MD
1135 N MICHIGAN AVE
SAGINAW MICH 48602

NEIL W LOVE MD
505 W TUSCOLA
FRANKENMUTH MICH 48734

ROBT I LURIE MD
2525 S WASHINGTON AVE
SAGINAW MICH 48601

THOS P MAHANEY MD
3521 STATE STREET
SAGINAW MICH 48602

JOHN E MANNING MD
815 N MICHIGAN AVE
SAGINAW MICH 48602

JOHN W MANNING III MD
705 ADAMS
SAGINAW MICH 48602

FRANCIS L MARKEY MD
1600 N MICHIGAN
SAGINAW MI 48602

JACK F MARTIN MD
705 ADAMS ST
SAGINAW MICHIGAN 48602

WM P MARTZOWKA MD R
2330 DELAWARE
SAGINAW MICH 48602

WM G MASON MD
1107 GRATIOT AVE
SAGINAW MICH 48602

HARRY C MATTHEWS MD
1227 N MICHIGAN AVE
SAGINAW MICH 48602

BEN R MAYNE MD
2111 MARSHALL CT
SAGINAW MI 48602

WM G MCEWEN MD
1600 N MICHIGAN AVE
SAGINAW MICHIGAN 48602

HENRY J MEYER MD L
6243 DIXIE HWY
BRIDGEPORT MI 48722

V ROBERT MIKAN MD
3900 HOLLAND RD
SAGINAW MICHIGAN 48601

GLENN F MILLER MD
2224 MERSHON
SAGINAW MICHIGAN 48602

ULRICH MOESER MD
1447 N HARRISON
SAGINAW MI 48602

AHMOD S MOOLA MD M

A RAYMOND MOON MD L
705 SUNSET LANE
CADILLAC MI 49601

JAMES C MOONEY MD
1600 N MICHIGAN AVE
SAGINAW MICHIGAN 48602

LEONARD J MORGRETTE MD
3424 DAVENPORT
SAGINAW MI 48602

RICHARD D MUDD MD R
1001 HOYT ST
SAGINAW MI 48607

DONAL T MULHERN MD
2716 S JEFFERSON AVE
SAGINAW MI 48607

ALBERT P MURPHY MD
303 N MICHIGAN AVE
SAGINAW MI 48602

RICHARD T MURPHY DDS A
1718 N MICHIGAN
SAGINAW MI 48602

MORRIS J MURRAY MD
3424 DAVENPORT
SAGINAW MICHIGAN 48602

OSCAR A NELSON MD
3324 DAVENPORT
SAGINAW MICHIGAN 48602

T S NESE MD
521 FIRST AVE
GALLIPOLIS OHIO 45631

PAUL R NOBLE MD
1447 N HARRISON
SAGINAW MICHIGAN 48602

ROBERT T NOLTA MD
1805 VET MEMORIAL PKWY
SAGINAW MI 48601

ROBT O NORTHWAY MD
1811 N MICHIGAN
SAGINAW MI 48602

FRANK O NOVY MD L
P O BOX 1814
SAGINAW MI 48605

CARLOS OBREGON MD
17162 STAMWICH BLVD
LIVONIA MI 48152

JAMES E PACKER MD
5230 STATE ST
SAGINAW MICHIGAN 48603

MANUEL M PEREA MD
599 N FROST DR
SAGINAW MI 48603

CLIFFORD D POTVIN MD
4726 COLONIAL DR APT 4
SAGINAW MI 48602

ROBT F POWERS MD
1600 N MICHIGAN
SAGINAW MICHIGAN 48602

PERRY E PRATHER MD
1227 N MICH AVE
SAGINAW MICH 48602

JOSEPH M PRICE MD
9905 S GERA ROAD
BIRCH RUN MI 48415

J EUGENE RANK MD
1107 GRATIOT AVENUE
SAGINAW MICHIGAN 48602

NICHOLAS REDFIELD MD
1811 N MICHIGAN AVE
SAGINAW MI 48602

JOS J REICHMAN MD
1455 SHEFFIELD
SAGINAW MI 48605

WILLIAM T RICE MD
1827 N MICHIGAN AVE
SAGINAW MICHIGAN 48602

NED W RICHARDS MD
3518 STATE ST
SAGINAW MICH 48602

HARRY J RICHTER MD R
1401 W DELTA DR
SAGINAW MICH 48603

IVAN J ROGGEN MD
1227 N MICHIGAN
SAGINAW MICH 48602

DAVE B RUSKIN MD
1600 N MICHIGAN
SAGINAW MICH 48602

RICHARD S RYAN MD
1581 S WASHINGTON AVE
SAGINAW MI 48601

DONALD V SARGENT MD
1703 N MICHIGAN AVE
SAGINAW MICH 48602

G A SARMIENTO MD
1600 N MICHIGAN AVE
SAGINAW MI 48602

A J N SCHNEIDER MD
509 S JEFFERSON AVE
SAGINAW MICH 48607

FRANK R SCHULTZ MD
243 W BROAD ST
CHESANING MI 48616

GERARD SCOTT MD M
5670 DIXIE HWY
SAGINAW MI 48601

MARTIN C SHARP MD
1803 N MICHIGAN AVE
SAGINAW MICH 48602

JOHN L SHEK MD
803 N MICHIGAN
SAGINAW MICHIGAN 48602

SUEL A SHELDON MD L
77 ELMVIEW CT
SAGINAW MICH 48602

JOHN W SHERMAN MD
403 S FAYETTE
SAGINAW MICHIGAN 48602

GERALD A SIEGGREEN MD
1227 N MICHIGAN
SAGINAW MI 48602

UCA FRANCES SIMMS MD
3107 SHELL
MIDLAND TEXAS 79701

C A SKOWRONSKI MD
1401 E GENESEE ST
SAGINAW MI 48607

HOMER G SLADE MD R
1667 S WASHINGTON AVE
SAGINAW MI 48601

T A SMITH MD
1600 N MICHIGAN AVE
SAGINAW MI 48602

DONALD E SPENGLER DDS A
4291 STATE ST
SAGINAW MI 48603

AARON C STANDER MD
1411 COURT ST
SAGINAW MICH 48602

WILLARD M STUCKEY MD
2565 MERSHON MD
SAGINAW MI 48602

HUGH L SULFRIDGE JR MD
1011 N MICHIGAN AVE
SAGINAW MI 48602

JOSEPH E TALBOT MD
1311 N MICHIGAN AVE
SAGINAW MI 48602

ROBERT E TAYLOR MD
1447 N HARRISON
SAGINAW MICHIGAN 48602

ARTHUR B THOMPSON MD
2144 OTTAWA ST
SAGINAW MICH 48602

DENNIS M TIBBLE MD
1203 N MICHIGAN
SAGINAW MI 48602

GUNTHER E TIEDKE MD
120 N MICHIGAN AVE
SAGINAW MICH 48602

ROBERT J TOTEFF MD
2110 MORSON
SAGINAW MICHIGAN 48602

MELVIN E TRAMITZ MD
711 SOMERSET RD
SAGINAW MICHIGAN 48603

DONALD TUCKEY MD
1227 N MICHIGAN AVE
SAGINAW MI 48602

TERENCE K TUTTLE MD
1109 COURT ST
SAGINAW MICHIGAN 48602

WM G UNDERHILL MD
8 FIVE OAKS
SAGINAW MICHIGAN 48603

ALFONSO A VILLEGAS MD
1232 N MICHIGAN AVE
SAGINAW MI 48602

JOHN H VINCENT MD
4158 ATWOOD LN
BRIDGEPORT MI 48722

ROBERT L VITU M D
703 W GENESEE
SAGINAW MICHIGAN 48602

VLADIMIR K VOLK MD L
120 N MICHIGAN AVE
SAGINAW MI 48602

BARRY F WAITE MD
4291 STATE RD
SAGINAW MI 48603

PETER R WALSH MD
331 S JEFFERSON
SAGINAW MI 48607

LESTER E WEBB MD
1005 GRATIOT
SAGINAW MI 48602

ARNO W WEISS MD
3521 STATE ST
SAGINAW MICH 48602

NORMAN WESTLUND MD
3253 CONGRESS
SAGINAW MICHIGAN 48602

EDWIN M WRIGHT MD
1311 N MICHIGAN
SAGINAW MICH 48602

MAURICE C WYNES MD
SAGINAW COUNTY HOSP
SAGINAW MI 48605

JOHN YOUNG MD
705 COOPER ST
SAGINAW MICHIGAN 48602

ST. CLAIR

ROBT S BAILEY MD
2425 MILITARY ST
PORT HURON MICHIGAN 48060

RONALDO S BALBOA MD
1216 SIXTH ST
PORT HURON MI 48060

KENNETH C BANTING MD
403 PEOPLES BK BLDG
PORT HURON MICH 48060

J A BARSS MD
1225 10TH ST
PORT HURON MICH 48060

JOHN C S BATTLEY MD L
2038 MILITARY ST
PORT HURON MI 48060

JOS F BEER MD
104 N RIVERSIDE AVE
SAINT CLAIR MICH 48079

WM G BENNETT MD
210 S MAIN ST
YALE MICH 48097

ERWIN W BLATTER MD L
3864 GRATIOT AVE
PORT HURON MICH 48060

CHAS L BORDEN MD
236 HURON AVE
PORT HURON MICHIGAN 48060

THOS H BOTTOMLEY JR MD
1102 SIXTH ST
PORT HURON MICH 48060

WALTER H BOUGHNER MD
325 PLEASANT ST
ALGONAC MICH 48001

WM S BOWDEN MD
130 WASHINGTON
MARINE CITY MICH 48039

EZRA V BRIDGE MD
416 EDISON BLVD
PORT HURON MICH 48060

COLMAN J BURKE MD
311 PINE ST
PORT HURON MICHIGAN 48060

CLARENCE L CANDLER MD L
1611 HAWTHORNE RD
GROSSE PTE WOODS MI 48236

JOHN D CANTWELL JR MD
2425 MILITARY
PORT HURON MICHIGAN 48060

MAHMOUD CHAFTY MD
2425 MILITARY
PORT HURON MICH 48060

WM D CLELAND JR MD
1209 10TH ST
PORT HURON MICH 48060

ROBT P CLIFFORD MD
506 S RIVERSIDE DR
ST CLAIR MICH 48079

BENJ C CLYNE MD
103 N MAIN ST
YALE MICH 48097

JOHN J COURY JR MD
1225 10TH ST
PORT HURON MICH 48060

WM T DAVISON MD
2425 MILITARY ST
PORT HURON MICH 48060

WM J DINNEN JR MD
2425 MILITARY
PORT HURON MICH 48060

NICHOLAS G DOUVAS MD
4200 GRATIOT
PORT HURON MI 48060

JEAN PAUL DUPUIS MD
1502 SHUMAKER
PORT HURON MICH 48060

THOMAS B EYL MD
1605 FRED MOORE HWY
ST CLAIR MI 48079

EDWIN H FENTON MD R
4620 TRI PAR DR
SARASOTA FL 33580

E W FITZGERALD JR MD
1102 SIXTH ST
PORT HURON MICHIGAN 48060

ARMIN T FRANKE M D
2425 MILITARY
PORT HURON MICH 48060

ERWIN J FUERST MD
1322 N RIVER RD
ST CLAIR MI 48079

HAROLD E FULTON JR MD
2425 MILITARY ST
PORT HURON MICHIGAN 48060

JAMES F GERRITS MD
1322 N RIVER RD
ST CLAIR MI 48079

ANTHONY C GHOLZ MD
1209 10TH ST
PORT HURON MICH 48060

JOHN R GILMORE MD
317 MICH BANK BLDG
PORT HURON MICH 48060

CARLOS F GONZALEZ MD
1605 DIVISION RD
ST CLAIR MI 48079

H J HAZLEDINE MD
4685 LAKESHORE RD
PORT HURON MICH 48060

DAVID M C HISLOP MD
5076 LAKESHORE RD
PORT HURON MI 48060

ALEXANDER E HLIVKO MD
1605 FRED W MOORE HWY
ST CLAIR MICHIGAN 48079

THOMAS E HODGINS MD A
584 CRYSTAL DRIVE
MT LEBANON PA 15228

RUSSELL J HOLCOMB MD
140 S MARKET
MARINE CITY MICH 48039

CHARLES N HOYT MD
1501 KRAFFT RD
PORT HURON MI 48060

THOMAS C JOHNSTON MD
2425 MILITARY ST
PORT HURON MICH 48060

OSCAR B KAHN MD

CAPAC MICH 48014

HARRY N KIRBAN MD
5500 LAKESHORE RD
PORT HURON MICHIGAN 48060

DONALD A KOCH MD
2425 MILITARY ST
PORT HURON MICHIGAN 48060

CLEMENS M KOPP MD
1209 WILLOW ST
PORT HURON MI 48060

HAROLD R KOSTOFF MD
1209 10TH ST
PORT HURON MICHIGAN 48060

JAMES LAURIDSEN MD
621 RIVER ST
PORT HURON MICH 48060

REUBEN R LICKER MD
2425 MILITARY ST
PORT HURON MICHIGAN 48060

CLAUDE A LUDWIG MD
916 SEVENTH ST
PORT HURON MICH 48060

FREDK E LUDWIG MD
916 7TH ST
PORT HURON MICH 48060

ROBT M LUGG MD
P O BOX 924
PORT HURON MICHIGAN 48060

HARRY E MAYHEW MD
613 N RIVERSIDE DR
ST CLAIR MI 48079

JOHN M MILLER
1025 HURON AVE
PORT HURON MICHIGAN 48060

GLENN E MOHNEY MD
1131 ERIE ST
PORT HURON MI 48060

ALVIN N MORRIS MD
621 RIVER ST
PORT HURON MICH 48060

FRED NERUDA MD
640 N THIRD ST
ST CLAIR MI 48079

WALTER S NOVAK MD
1025 HURON AVE
PORT HURON MICH 48060

JUAN E OLIVERA MD
2425 MILITARY ST
PORT HURON MI 48060

MICHAEL RAFTERY MD
2425 MILITARY
PORT HURON MICHIGAN 48060

RICHARD C RELKEN MD
2920 PINE GROVE
PORT HURON MI 48060

ROBT E ROWE MD
108 MCMORRAN BLVD
PORT HURON MICHIGAN 48060

JOHN J RUTLEDGE MD
521 PEOPLES BANK BLDG
PORT HURON MI 48060

MICHAEL I SABBAGH MD
1322 N RIVER RD
ST CLAIR MI 48079

JOS L SANDERSON MD
515 PINE ST
PORT HURON MICH 48060

WALDO A SCHAEFER MD
302 MICH BANK BLDG
PORT HURON MICH 48060

JOHN A SERNIAK MD
104 S MAIN ST
YALE MICH 48097

JAMES W SHARPE MD
1209 10TH ST
PORT HURON MI 48060

ELMORE D SHOUDY MD
902 TENTH AVE
PORT HURON MICHIGAN 48060

JAMES J SNIDER MD
2425 MILITARY
PORT HURON MICH 48060

JAMES H TISDEL MD
1209 10TH ST
PORT HURON MI 48060

GLENN F TOMSU MD
1209 10TH ST
PORT HURON MICH 48060

CHAS O TOWNLEY MD
1209 TENTH ST
PORT HURON MICH 48060

ARTHUR H ULMER JR MD
1209 TENTH ST
PORT HURON MICH 48060

SIDNEY C WALKER MD
1209 TENTH ST
PORT HURON MICH 48060

J RALEIGH WARE MD R
3107 24TH ST
PORT HURON MI 48060

GORDON H WEBB MD
875 MICHIGAN AVE
MARYSVILLE MI 48040

W C WECKESSER MD
1602 MILITARY
PORT HURON MICHIGAN 48060

DANIEL J WILHELM MD
P O BOX 924
PORT HURON MI 48060

KENNETH W YOST MD
1305 GRATIOT AVE
MARYSVILLE MICH 48040

JOHN A YOUNGS MD
718 GRISWOLD ST
PORT HURON MICHIGAN 48060

ARTHUR B YULL MD
1225 10TH ST
PORT HURON MICHIGAN 48060

ST. JOSEPH

MARY O ANDERSON MD
889 OLNEY RD
LEONIDAS MI 49066

CHARLES R BABER MD
204 E WEST ST
STURGIS MI 49091

LAWRENCE A BERG MD
106 E CHICAGO RD
STURGIS MICH 49091

D E BRADLEY MD
234 S MAIN ST
COLON MICHIGAN 49040

WILBUR G BRAHAM MD
111 S MONROE
STURGIS MICH 49091

PAUL L BROTHERS M D
1313 ROLLING RIDGE LN
STURGIS MI 49091

HAROLD DETTMAN MD
MAPLECREST PLAZA
STURGIS MICHIGAN 49091

ROBT H EVANS MD
111 S MONROE ST
STURGIS MICH 49091

S ALBERT FIEGEL MD
111 S MONROE
STURGIS MICH 49091

ROSCOE J FORTNER MD
137 PORTAGE AVE
THREE RIVERS MICH 49093

ELEANOR M GILLESPIE MD A
173 WABAN HILL RD
NEWTON MA 02167

JASON K HARTJEN MD
206 E WEST ST
STURGIS MI 49091

JOHN M JACOBOWITZ MD
LINCOLN AT MILLARD
THREE RIVERS MICH 49093

OLIN L LEPARD MD
KNOLLWOOD DR R#5
STURGIS MICH 49091

ROBERT LEWIS MD
104 S LAKEVIEW ST
STURGIS MI 49091

DOUGLAS A MACK MD
COUNTY HLTH DEPT
CENTREVILLE MI 49032

HUGH MCCULLOGH MD
111 S MONROE ST
STURGIS MI 49091

CHARLES W O DELL MD
117 SPRING ST
THREE RIVERS MICH 49093

FRANK OLNEY MD

CENTREVILLE MI 49032

HARRY C PENNINGTON MD
118 S KALAMAZOO
WHITE PIGEON MICH 49099

STANLEY C PENZOTTI MD
117 SPRING ST
THREE RIVERS MICH 49093

CLARK G PORTER MD
226 EAST ST
THREE RIVERS MICH 49093

DONALD R SCHIMNOSKI MD
THREE RIVERS MED CLNC
THREE RIVERS MICH 49093

GEO D SHAW MD
117 SPRING ST
THREE RIVERS MICH 49093

JOHN P SHELDON MD
206 E WEST ST
STURGIS MICH 49091

ROBT D SMITH MD

COLON MI 49040

HEINZ R WEISHEIT MD
ROUTE 1
STURGIS MI 49091

CHAS R ZIMONT MD

CONSTANTINE MICH 49042

RAYMOND D ZIMONT MD

CONSTANTINE MI 49042

SANILAC

JAMES R CRIPPS MD

MARLETTE MICH 48453

DOROTHY DUVALL MD A
817 PATTERSON AVE
BAY CITY MI 48706

LARRY G ELLIS MD
426 W SPEAKER
SANDUSKY MI 48471

FRANCES A FORD MD L
2683 S LAKESHORE RD
APPLEGATE MI 48401

WELDON A GIFT MD L

MARLETTE MI 48453

GERALD L GROAT MD

DECKERVILLE MI 48427

ROBT K HART MD L

CROSWELL MI 48422

MICHAEL H JAYSON MD
2764 LORRAINE ST
MARLETTE MICHIGAN 48453

JOHN W MC CREA MD

MARLETTE MI 48453

KEATE T MC GUNEGLE MD

SANDUSKY MI 48471

NEIL MUIR MD

CROSWELL MI 48422

CHARLES OSHAGUNESSY MD

DECKERVILLE MI 48427

M COLE SEAGER MD

BROWN CITY MI 48416

DUANE E SMITH MD

BROWN CITY MI 48416

G EVANS TWEEDIE MD L

SANDUSKY MI 48471

S MARTIN TWEEDIE MD L

SANDUSKY MI 48471

J C WEBSTER MD L

MARLETTE MI 48453

RAYMOND J WINFIELD MD
3014 MAIN ST
MARLETTE MICH 48453

SHIAWASSEE

ALFRED L ARNOLD JR MD L
R 1
OVID MI 48866

EUGENE S AUSTIN MD
1260 ADA ST
OWOSSO MICH 48867

GEORGE M AWAIS MD
113 E WILLIAMS ST
OWOSSO MI 48867

NORMAN F BACH MD
113 E WILLIAMS
OWOSSO MICH 48867

WALTER BJARNESEN MD A
216A MT VERNON AVE
WILLIAMSBURG VA 23185

CHAS E BLACK MD
529 W GRAND RIVER
WILLIAMSTON MI 48895

RICHARD C BROWN MD
113 E WILLIAMS ST
OWOSSO MICHIGAN 48867

WALTER D BUZZARD MD

CHESANING MI 48616

ELWOOD M CHIPMAN MD R

COLDWATER MI 49036

ROBERT CLIFFORD MD
MATTHEWS BLDG
OWOSSO MICHIGAN 48867

ALFRED W FOERSTER MD
113 E WILLIAMS ST
OWOSSO MICHIGAN 48867

WM J A FORD JR MD
113 E WILLIAMS ST
OWOSSO MICHIGAN 48867

HENRY T FORSYTH MD
137 S SAGINAW ST
CHESANING MI 48616

JAMES H GRAVES MD R
150 S NORTON
CORUNNA MI 48817

ELIZABETH A L GURDEN
113 E WILLIAMS ST
OWOSSO MICH 48867

JOHN B HANNAH MD
MATTHEWS BLDG
OWOSSO MI 48867

JOHN E HARROUN MD
323 N BALL ST
OWOSSO MI 48867

R V HARROUN MD
323 N BALL ST
OWOSSO MICHIGAN 48867

JOHN HOFSTRA MD

OWOSSO MICHIGAN 48867

VERNE L HOSHAL MD
104 W CLINTON
DURAND MICH 48429

SUN HYOO KIM MD
203 N CEDAR ST
OWOSSO MI 48867

JOHN F MAC GREGOR MD
113 E WILLIAMS ST
OWOSSO MICH 48867

J S MCGEEHAN MD
MATTHEWS BLDG
OWOSSO MICHIGAN 48867

EDWIN R MC KNIGHT MD
320 N WASHINGTON ST
OWOSSO MICH 48867

PHILLIP J MOORE MD
221 E NORTH ST
OWOSSO MI 48867

JOHN E MOROVITZ MD
113 E WILLIAMS
OWOSSO MI 48867

JAMES H PARK MD
812 BRADLEY ST
OWOSSO MICH 48867

ROLLAND PHILLIPS MD
MATTHEWS BLDG
OWOSSO MICH 48867

CHESTER J RICHARDS MD L
101 E MONROE ST
DURAND MI 48429

ROBERT L ROTY MD
MATTHEWS BLDG
OWOSSO MI 48867

JOS F SAHLMARK MD
812 BRADLEY ST
OWOSSO MICH 48867

PETER SAUER MD
113 E WILLIAMS
OWOSSO MICH 48867

WALTER F SHEPHERD MD R
BOX 148
COLDWATER MI 49036

WM F WEINKAUF MD L

CORUNNA MI 48817

CLAUDE L WESTON MD L
1215 DEVONSHIRE
OWOSSO MI 48867

GEO B WICKSTROM MD
529 CLARK AVE
OWOSSO MICH 48867

ROBERT B YUHN MD
826 W KING
OWOSSO MI 48867

TUSCOLA

NORMA ANDERSON MD
206 ELLINGTON
CARO MICHIGAN 48723

JAMES H BALLARD MD

CASS CITY MI 48726

MAURICE H CHAPIN MD
P O BOX 323
MILLINGTON MICHIGAN 48746

VERSA V COLE MD
LOCK BOX A
CARO MICH 48723

WILLARD W DICKERSON MD R
309 1/2 E ERIE ST
ALBION MI 49224

HAROLD T DONAHUE MD
4674 HILL ST
CASS CITY MICH 48726

E N ELMENDORF II MD

VASSAR MI 48768

RICHARD O FLETT MD

MILLINGTON MI 48746

NURETTIN B GOKCORA MD
MENTAL HLTH INSTIT
INDEPENDENCE IOWA 50644

ROBT R HOWLETT MD R
MCMASTERS BRIDGE RD
STAR RTE 221A

GRAYLING MI 49738

GEZA KOVACS MD
861 GILFORD ROAD
CARO MICHIGAN 48723

ELMER H MERRILL MD
506 GILFORD RD
CARO MICH 48723

EDWARD J MILES MD

CARO MI 48723

HERBERT L NIGG MD

CARO MI 48723

LLOYD L SAVAGE MD L
5208 PORT AUSTIN RD
CASEVILLE MI 48725

EWALD C SWANSON MD L
220 N MAIN
VASSAR MICH 48768

MITCHELL URBAN MD
CARO STATE HOSPITAL
CARO MI 48723

OTTO VON RENNER MD L
BOX 396
REESE MI 48757

VAN BUREN

CARL F BOOTHBY MD
19 S CENTER
HARTFORD MI 49057

FREDK M BOOTHBY MD R

LAWRENCE MI 49064

MAURICE D BUSKIRK MD
215 N KALAMAZOO
PAW PAW MI 49079

JOS E COOPER MD
M-43 WEST
BANGOR MICH 49013

JAMES M DAVIS MD
424 HURON ST
SOUTH HAVEN MICHIGAN 49090

BERT DIEPHUIS MD
511 HURON ST
SOUTH HAVEN MI 49090

H DAVID FENSKE MD
412 PHOENIX ST
SOUTH HAVEN MI 49090

AVISON GANO MD
417 MONROE ST
BANGOR MICH 49013

GEORGE E HUG MD
81 MONROE ST
SOUTH HAVEN MI 49090

JOHN F ITZEN MD
PO BOX 485
SOUTH HAVEN MICH 49090

JOHN A KLEBER MD
365 BROADWAY
SOUTH HAVEN MICH 49090

JOHN LAWTHER MD
PO BOX 191
HARTFORD MICHIGAN 49057

FRANK J LOOMIS MD
304 OAK
PAW PAW MI 49079

HENRY J LUKASZEK MD
77 N SHORE DRIVE
SOUTH HAVEN MI 49090

ROSCOE I MCFADDEN MD
RFD #1 BOX 83
BLOOMINGDALE MI 49026

DAVID J MILLARD MD
305 E OAK ST
PAW PAW MI 49079

DALE K MORGAN MD
403 PHOENIX ST
SOUTH HAVEN MICHIGAN 49090

ARTHUR E PARKS MD
148 N MAIN
LAWTON MI 49065

R W SPALDING M D
PO BOX 280
GOBLES MI 49055

ADELBERT L STAGG MD
9 N MAPLE ST
HARTFORD MICH 49057

G LEE STAGG MD
BOX 307
HARTFORD MICHIGAN 49057

RUTH E A STAGG MD
BOX 38
HARTFORD MICH 49057

PAUL W SUNDIN MD

DECATUR MI 49045

CHARLES TEN HOUTEN MD
215 N KALAMAZOO
PAW PAW MI 49079

EDWIN H TERWILLIGER MD
10428 SPOONBILL RD W
BRADENTON FL 33505

MARTIN J URIST MD R
ROUTE 5
SOUTH HAVEN MI 49090

DAVID B WITTE MD
403 PHOENIX ST
SOUTH HAVEN MI 49090

WM R YOUNG MD L
THIRD ST
LAWTON MI 49065

WASHTENAW

MURRAY R ABELL MD
1335 E CATHERINE ST
ANN ARBOR MI 48104

DON K ALEXANDER MD
301 N INGALLS ST
ANN ARBOR MI 48104

BARRY H ALFORD MD
385 N MILL
PLYMOUTH MICHIGAN 48170

RICHARD J ALLEN MD
UNIVERSITY HOSPITAL
ANN ARBOR MICHIGAN 48104

LYLE M ALLIS MD
2355 E STADIUM BLVD
ANN ARBOR MI 48104

DAVID G ANDERSON MD
2490 ADARE
ANN ARBOR MICH 48104

GERHARD D ANDERSON MD A
9500 E ORCHARD DR
ENGLEWOOD CO 80110

ROBT E ANDERSON MD
2136 S SEVENTH
ANN ARBOR MI 48103

RUSSELL C ANDERSON MD A
UNIV MEDICAL CTR
ANN ARBOR MI 48104

HENRY D APPELMAN MD
UNIV MEDICAL CENTER
ANN ARBOR MI 48104

RUSSELL M ATCHISON MD
501 W DUNLAP
NORTHVILLE MICH 48167

ROBERT G AUSE MD
1821 SHERIDAN
ANN ARBOR MICHIGAN 48104

CARL E BADGLEY MD L
711 W VENICE AVE W
VENICE FLORIDA 33595

ROBT W BAILEY MD
UNIVERSITY HOSP
ANN ARBOR MICH 48104

DALE E BAKER MD
ST JOSEPH MERCY HOSP
ANN ARBOR MI 48104

EMILY A BANDERA MD
4200 E HURON RIVER DR
ANN ARBOR MICHIGAN 48104

JAROSLAV M BANDERA MD
4200 E HURON RIVER DR
ANN ARBOR MICHIGAN 48104

NORMAN L BANGHART MD
1950 MANCHESTER RD
ANN ARBOR MICH 48104

PAUL S BARKER MD R
BOX 87
BONNOTS MILL MO 65016

R CRAIG BARLOW MD
326 N INGALLS ST
ANN ARBOR MICH 48104

WALTER L BARRON MD
2201 DELAWARE
ANN ARBOR MICHIGAN 48103

WM A BARSS MD
525 W CROSS ST
YPSILANTI MICH 48197

LEE E BARTHOLOMEW MD
1355 FAIRLANE DR
ANN ARBOR MI 48104

GAIL M BARTON MD A
N P I UNIV HOSP
ANN ARBOR MI 48104

THOS J BASS MD
201 S HAMILTON
YPSILANTI MICH 48197

PAUL H BASSOW MD
ST JOSEPH HOSP
ANN ARBOR MI 48104

JOHN G BATSAKIS MD
U OF M - PATH DEPT
ANN ARBOR MI 48104

GERHARD H BAUER MD
2015 MANCHESTER RD
ANN ARBOR MICH 48104

JERE M BAUER MD
1313 E ANN ST
ANN ARBOR MICH 48104

SAML BEHRMAN MD
2866 PROVINCIAL DR
ANN ARBOR MICH 48104

WM H BEIERWALTES MD
U M MEDICAL CENTER
ANN ARBOR MICHIGAN 48104

RICHARD A BEISON MD
1795 W STADIUM
ANN ARBOR MICHIGAN 48103

WALTER BELSER MD
2310 E STADIUM BLVD
ANN ARBOR MICH 48104

LEONARD F BENDER MD
1313 E ANN ST
ANN ARBOR MICH 48104

PAUL J BENSON JR MD
227 N SHELDON RD
PLYMOUTH MICHIGAN 48170

R M BENSON MAJ MC A
4601 PRISCILLA LN
WICHITA FALLS TX 76306

FREDK E BENTLEY MD
851 S MAIN ST
PLYMOUTH MICH 48170

TERRY J BERGSTROM MD A
UNIV MEDICAL CTR
ANN ARBOR MI 48104

R C BERNREUTER MD
213 CLARK ST
SALINE MI 48176

JOHN N BICKNELL MD
703 FIRST NATL BLDG
ANN ARBOR MICHIGAN 48106

ALBERT J BLAIR JR MD
1739 SHERIDAN
ANN ARBOR MI 48104

GERALD E BLANCHARD MD
775 SO MAIN ST
CHELSEA MI 48118

LYNN W BLUNT MD
P O BOX 2060
ANN ARBOR MI 48106

DELBERT E BOBLITT MD
2112 WALLINGFORD
ANN ARBOR MICHIGAN 48104

WILLIAM J BOGARD MD A
BOX A
YPSILANTI MI 48197

ROGER BOLES MD
980 COUNTRY CLUB RD
ANN ARBOR MICHIGAN 48105

EDMUND S BOTCH MD
2310 E STADIUM BLVD
ANN ARBOR MICH 48104

JAMES H BOTSFORD MD
775 S MAIN ST
CHELSEA MICHIGAN 48118

JOHN E BOUDEMAN MD
425 E WASHINGTON ST
ANN ARBOR MI 48108

EARL A BRANDL MD
HYDRA MATIC DIVISION
YPSILANTI MI 48197

RALPH L BRANDT MD
326 N INGALLS
ANN ARBOR MICHIGAN 48104

BARRY A BREAKEY MD
2216 MEDFORD
ANN ARBOR MICHIGAN 48104

WILSON K BREWER MD R
4255 WASHTENAW
ANN ARBOR MI 48104

EUGENE M BRITT PHD A
1411 BARDSTOWN TR
ANN ARBOR MI 48105

ROBERT H BROUGHER MD
606 W STADIUM BLVD
ANN ARBOR MI 48103

WALTER G BROVINS MD
YPSILANTI STATE HOSP
YPSILANTI MICHIGAN 48197

PHILIP N BROWN MD R
1265 LONG LAKE COURT
BRIGHTON MI 48116

WM E BROWN III MD
2101 BELMONT RD
ANN ARBOR MICH 48104

PAUL J BROWNSON MD
CHELSEA MEDICAL CLINIC
CHELSEA MI 48118

H C BRYANT M D
425 E WASHINGTON
ANN ARBOR MICHIGAN 48108

HARRY D BUCALO JR MD
2207 S SEVENTH
ANN ARBOR MICHIGAN 48103

ROBERT A BUCHANAN MD
3045 FOXCROFT
ANN ARBOR MICHIGAN 48104

ROY E BUCK MD A
1405 E ANN ST
ANN ARBOR MI 48104

KEITH C BURNES MD A
UNIVERSITY HOSPITAL
ANN ARBOR MI 48104

JACK L BUSH MD
1950 MANCHESTER RD
ANN ARBOR MICHIGAN 48104

GERALD E BUTLER MD
2311 E STADIUM BLVD
ANN ARBOR MICHIGAN 48104

GEORGE H CAMERON MD
2311 E STADIUM
ANN ARBOR MI 48104

COLIN CAMPBELL MD
2110 WOMENS HOSPITAL
ANN ARBOR MI 48104

DARRELL A CAMPBELL MD
617 STRATFORD
ANN ARBOR MICH 48104

CHARLES CANTY MD A
2347 YOST BLVD
ANN ARBOR MI 48104

A M CAPILI MD
840 MAUS
YPSILANTI MI 48197

E ESQUEJO CAPILI MD
840 MAUS
YPSILANTI MI 48197

ROBT B CARBECK MD
3080 EXMOOR
ANN ARBOR MICHIGAN 48104

CATHERINE CARROLL MD
1130 HILL ST
ANN ARBOR MICH 48104

DEAN P CARRON MD
425 E WASHINGTON
ANN ARBOR MICHIGAN 48108

SAMUEL H CARTER MD
ST JOSEPH MERCY HOSP
ANN ARBOR MI 48104

JAMES T CASSIDY MD
590 LANSWAY
ANN ARBOR MI 48103

JOSEPH C CERNY MD
UNIVERSITY MED CTR
ANN ARBOR MICHIGAN 48104

DANIEL D CHAPMAN MD
825 PACKARD RD
ANN ARBOR MI 48104

GEORGE J CHATAS MD
2984 HICKORY LANE
ANN ARBOR MICHIGAN 48104

ROBERT H CHESKY MD
2020 HALL AVE
ANN ARBOR MI 48104

CHAS G CHILD 111 MD
UNIVERSITY HOSPITAL
ANN ARBOR MICHIGAN 48104

EUGENE F CLAEYS MD
3775 GREENBRIAR #234A
ANN ARBOR MI 48105

ALLAN G CLAGUE MD
1743 WALTHAM DR
ANN ARBOR MI 48103

ENSIGN E CLYDE MD
1181 S MAIN ST
PLYMOUTH MICH 48170

BRUCE E COHAN MD
2355 E STADIUM BLVD
ANN ARBOR MICHIGAN 48104

JEROME W CONN MD
200 ORCHARD HILL DR
ANN ARBOR MICH 48104

JAMES W COPPING JR MD A
2757 CANTERBURY
ANN ARBOR MI 48104

MORTON S COX JR MD
3991 PENBURTON LN
ANN ARBOR MI 48105

CLARENCE E CROOK MD
1657 GLENNWOOD RD
ANN ARBOR MICHIGAN 48104

THOMAS N CROSS MD
UNIV MEDICAL CENTER
ANN ARBOR MICHIGAN 48104

EDWARD G CURTIS MD
105 W STADIUM BLVD
ANN ARBOR MICHIGAN 48103

LAWRENCE A DANTO MD A
ST JOSEPH MERCY HOSP
ANN ARBOR MI 48104

CHARLES W DAVENPORT MD
CHILDREN S PSYCH HOSP
ANN ARBOR MI 48104

FRED M DAVENPORT MD
1038 MARTIN PL
ANN ARBOR MICH 48104

PAULA G DAVEY MD
425 E WASHINGTON
ANN ARBOR MI 48108

WINTHROP N DAVEY MD
495 HILLSPUR
ANN ARBOR MICHIGAN 48105

RICHARD W DEATRICK MD
2940 HICKORY LANE
ANN ARBOR MICH 48104

P F ROBERT DECAIRES MD
2730 N RANDOLPH
ARLINGTON VA 22207

RUSSELL N DE JONG MD
1526 HARDING RD
ANN ARBOR MICH 48104

THOMAS J DEKORNFELD MD
2581 HAWTHORN RD
ANN ARBOR MICHIGAN 48104

THOMAS A DELL MD
2900 BRANDYWINE
ANN ARBOR MI 48104

GEORGE R DEMUTH MD
UNIV HOSPITAL
ANN ARBOR MICH 48104

W D DEN HOUTER MD
225 N SHELDON
PLYMOUTH MI 48170

JOHN S DE TAR MD L
55 W MAIN ST
MILAN MI 48160

RICHARD C DEW MD
2355 E STADIUM BLVD
ANN ARBOR MI 48104

RODRIGO DIAZ PEREZ MD
2939 RENFREW
ANN ARBOR MICHIGAN 48106

GORDON C DIETERICH MD
4038 JACKSON RD
ANN ARBOR MICH 48106

RICHARD S DILLMAN MD
1800 BALDWIN
ANN ARBOR MI 48104

REED O DINGMAN MD
221 N INGALLS
ANN ARBOR MICHIGAN 48104

BERTRAM D DINMAN MD
1132 ABERDEEN DR
ANN ARBOR MI 48104

CARA G DOANE MD
1715 WASHTENAW AVE
YPSILANTI MI 48197

VERNON N DODSON MD
1638 UNIVERSITY HOSP
ANN ARBOR MICH 48104

EDWARD R DOEZEMA MD
1111 E CATHERINE
ANN ARBOR MI 48104

WILBUR E DOLFIN MD
2210 MELROSE
ANN ARBOR MICHIGAN 48104

EDWARD F DOMINO MD
3071 EXMOOR
ANN ARBOR MICHIGAN 48104

RICHARD P DORR MD
ST JOSEPH MERCY HOSP
ANN ARBOR MI 48104

RUDENZ T DOUTHAT MD
1415 BEECHWOOD
ANN ARBOR MI 48103

JAMES R DRIVER MD
155 UNDERDOWN
ANN ARBOR MI 48105

CLYDE K DRYER MD
3033 SOPHIA ST
WAYNE MICH 48184

ALEXANDER P DUKAY MD
3501 WILLIS RD
YPSILANTI MI 48197

MAX L DURFEE MD
207 FLETCHER
ANN ARBOR MI 48104

JOHN E DWYER MD
425 E WASHINGTON
ANN ARBOR MI 48108

WM P EDMUNDS MD
21 S PROSPECT
YPSILANTI MICH 48197

MELVIN L EDWARDS JR MD
1210 MAPLE RD
ANN ARBOR MI 48103

JOHAN W ELIOT MD
SCH OF PUB HEALTH
ANN ARBOR MI 48104

LYLE D ELLIOTT MD
750 TOWNER ST
YPSILANTI MICH 48197

WARREN E EMLEY MD A
UNIV MEDICAL CTR
ANN ARBOR MI 48104

OTTO K ENGELKE MD L
313 WASHTENAW CO BLDG
ANN ARBOR MICHIGAN 48108

JEROME L EPSTEIN MD
27 SO PROSPECT
YPSILANTI MI 48197

MEHMET E ERDEM MD
PLYMOUTH STATE HOME
NORTHVILLE MI 48167

STEFAN S FAJANS MD
2485 DEVONSHIRE
ANN ARBOR MI 48104

ELWIN C FALK MD
461 N MANSFIELD
YPSILANTI MICHIGAN 48197

DANIEL J FALL MD
ST JOSEPH MERCY HOSP
ANN ARBOR MI 48104

HAROLD F FALLS MD
UNIVERSITY HOSP
ANN ARBOR MICH 48104

SAEED M FARHAT MD
424 ONAWAY
ANN ARBOR MI 48104

ARMANDO R FAVAZZA MD A
N P I UNIV OF MICH
ANN ARBOR MI 48104

BARBARA S FAVAZZA MD A
N P I UNIV OF MICH
ANN ARBOR MI 48104

JUAN V FAYOS MD
UNIVERSITY MED CENTER
ANN ARBOR MICHIGAN 48104

IRVING FELLER MD
2023 DEVONSHIRE
ANN ARBOR MI 48104

SHELDON L FELLMAN MD
2216 MEDFORD RD
ANN ARBOR MICHIGAN 48104

JAY S FINCH MD
51259 MURRAY HILL DR
PLYMOUTH MI 48170

STUART M FINCH M D
CHILD PSYCHIATRIC HOSP
ANN ARBOR MI 48104

GEO C FINK MD
411 LINDA VISTA
ANN ARBOR MICH 48104

GEORGE H FINK MD A
459 MANOR DR
ANN ARBOR MI 48105

JOHN A FINK MD A
UNIV MEDICAL CENTER
ANN ARBOR MI 48104

JOS V FISHER MD
116 PARK ST
CHELSEA MI 48118

ROBERT J FISHER MD
750 TOWNER
YPSILANTI MI 48197

ARTHUR W FLEMING MD
2126 PAULINE 304
ANN ARBOR MI 48103

WILLIAM J FOLEY MD
UNIV MEDICAL CTR
ANN ARBOR MI 48104

WINSLOW G FOX M D
715 N UNIVERSITY
ANN ARBOR MICH 48104

F BRUCE FRALICK MD
UNIVERSITY HOSP
D-2137 N OUT PATIENT
ANN ARBOR MI 48104

ROBT L FRANSWAY MD
2785 PARK RIDGE DR
ANN ARBOR MI 48103

ARTHUR B FRENCH MD
280 OAKWAY
ANN ARBOR MI 48105

A JAMES FRENCH MD
356 AUSABLE PLACE
ANN ARBOR MICH 48104

CHARLES F FREY MD
3555 DALEVIEW DR
ANN ARBOR MI 48103

MOSES M FROHLICH MD
1313 E ANN ST
ANN ARBOR MICH 48104

LYLE W FROST MD
309 N WASHINGTON ST
YPSILANTI MICH 48197

CARL M FRYE MD
301 N INGALLS
ANN ARBOR MICHIGAN 48104

T O GABRIELSEN MD
UNIVERSITY MED CENTER
DEPT OF RADIOLOGY
ANN ARBOR MI 48103

JOHN C GALL MD
2912 SHEFFIELD CT
ANN ARBOR MI 48105

JAMES E GALLIGAN MD
18471 HAGGERTY RD
NORTHVILLE MI 48167

D E GARRISON MD
205 S DAVENPORT
SALINE MI 48176

GEORGE A GATES MD
3689 FREDERICK DR
ANN ARBOR MI 48105

CHARLES F GEHRKE MD
ST JOSEPH MERCY HSOP
ANN ARBOR MI 48104

PAUL F GERIGK MD
250 E MICHIGAN
SALINE MI 48176

VLADO A GETTING MD
SCH OF PUB HLTH U OF M
ANN ARBOR MICH 48104

RALPH M GIGNAC MD
32320 MICHIGAN
WAYNE MICH 48184

PAUL W GIKAS MD
1900 MERSHON
ANN ARBOR MI 48103

ROSALIE J GING MD
VETERANS ADM HOSP
ANN ARBOR MI 48105

DONALD W GOIN MD A
2252 SO CIRCLE DR
ANN ARBOR MI 48103

ROBT I GOLDSMITH MD
216 MICH THEATRE BLDG
ANN ARBOR MI 48106

F E GONZALEZ-VIDELA MD A
3501 WILLIS RD
YPSILANTI MI 48197

J R G GOSLING MD
315 CORRIE RD
ANN ARBOR MICHIGAN 48105

JOEL D GOTTLIEB MD
3946 PENBERTON
ANN ARBOR MICHIGAN 48105

ALEXANDER GOTZ MD
2201 MEDFORD RD
ANN ARBOR MICH 48104

STUART M GOULD JR MD
MERCYWOOD HOSP BOX 65
ANN ARBOR MICHIGAN 48107

WILLIAM C GRABB MD
325 BARTON SHORE DR
ANN ARBOR MICHIGAN 48105

WM A GRACIE JR MD
2441 SHANNONDALE
ANN ARBOR MICHIGAN 48104

WM H GRAVES III MD
105 W STADIUM BLVD
ANN ARBOR MI 48103

JERRY M GRAY MD
ST JOSEPH MERCY HOSP
ANN ARBOR MI 48104

S PHILLIP GRILLO MD
265 MAIN ST
BELLEVILLE MI 48111

GERARD GROS MD
1025 BERKSHIRE
ANN ARBOR MI 48104

GLENN R GROUSTRA MD
555 E WILLIAMS
ANN ARBOR MI 48108

NORMA B GUTIERREZ MD
1507 PINE VALLY BLVD
ANN ARBOR MI 48104

DAN W HABEL MD M
WEST 104 5TH ST
SPOKANE WA 92204

GEO W HAGERMAN MD
321 N INGALLS ST
ANN ARBOR MICH 48104

JOHN W HALL MD A
BURNS CLINIC MED CTR
PETOSKEY MI 49770

WALTER W HAMMOND JR MD
221 N SHELDON RD
PLYMOUTH MI 48170

HEINRICH H HANDORF MD L
455 PARK PLACE
NORTHVILLE MI 48167

LAMAR J HANKAMP MD
2119 WOODSIDE
ANN ARBOR MICH 48104

MARVIN R HANNUM MD
54 W MAIN
MILAN MICH 48160

FREDERICK N HANSON MD
34178 SPRING VALLEY
WESTLAND MI 48185

E R HARRELL JR MD
UNIV MED CTR RM C
ANN ARBOR MICH 48104

BRADLEY M HARRIS MD L
27 S PROSPECT
YPSILANTI MICH 48197

SCOTT T HARRIS MD
44490 CLARE BLVD
PLYMOUTH MICHIGAN 48170

ROBT T HARTMAN MD
519 W MAIN
MILAN MICH 48160

WM N HAWKS JR MD A
UNIV MEDICAL CTR
ANN ARBOR MI 48104

DAVID K HEAPS MD A
UNIV MEDICAL CTR
ANN ARBOR MI 48104

GERHARDT A HEIN MD
2890 PEBBLE CREEK RD
ANN ARBOR MI 48104

JOHN W HENDERSON MD
UNIVERSITY HOSP
ANN ARBOR MICH 48104

ROBT C HENDRIX MD
1139 VESPER RD
ANN ARBOR MICH 48103

L DELL HENRY MD L
706 W HURON ST
ANN ARBOR MI 48103

F JAMES HERBERTSON MD
ST JOSEPH MERCY HOSP
ANN ARBOR MI 48104

JAMES E HERLOCHER MD
2355 E STADIUM BLVD
ANN ARBOR MI 48104

WM M HESTON III MD
720 E CATHERINE
ANN ARBOR MI 48104

SAMUEL P HICKS MD
1112 MEADOWBROOK
ANN ARBOR MICHIGAN 48103

H MARK HILDEBRANDT MD
940 MAIDEN LANE
ANN ARBOR MICH 48105

DORIN L HINERMAN MD
1313 E ANN ST
ANN ARBOR MICH 48104

NG HARRY HING MD
1323 FRANKLIN BLVD
ANN ARBOR MI 48103

MIKIO H HIRAGA MD
1795 W STADIUM
ANN ARBOR MICHIGAN 48103

FRED J HODGES MD L
5 HIGHLAND LN
ANN ARBOR MI 48104

DONALD J HOLMES MD
P O BOX 1011
CAREFREE ARIZONA 85331

JOHN F HOLT MD
1313 E ANN ST
ANN ARBOR MICH 48104

FRED HOLTZ MD
326 N INGALLS
ANN ARBOR MICHIGAN 48104

VERNE L HOSHAL JR MD A
ST JOSEPH MERCY HOSP
ANN ARBOR MI 48104

PHILLIP A HOSKINS MD
826 EDGEWOOD PL
ANN ARBOR MI 48103

FREDERIC B HOUSE MD
1240 CROSBY CRESCENT
ANN ARBOR MICH 48103

STACY C HOWARD MD R
1936 WHITEHALL DR
WINTER PARK FL 32789

WILLIAM F HOWATT MD
UNIVERSITY HOSPITAL
ANN ARBOR MICH 48104

PHILIP B HUIZENGA MD
BOX A
YPSILANTI MICHIGAN 48197

RALPH M HULETT MD
2881 PROVINCIAL DR
ANN ARBOR MICHIGAN 48104

RALPH F HULL MD A
UNIV MEDICAL CTR
ANN ARBOR MI 48104

DAVID W HUNTER MD A
UNIV MEDICAL CENTER
ANN ARBOR MI 48104

SAML J HYMAN MD
27342 MICHIGAN AVE
INKSTER MICH 48141

ROBT S IDESON II MD
2200 VINEWOOD AVE
ANN ARBOR MICHIGAN 48104

JOSEPH E JACKSON MD A
SCHOOL OF PUBLIC HLTH
UNIV OF MICH
ANN ARBOR MI 48104

JOS S JACOB MD
202 E WASHINGTON ST
ANN ARBOR MICH 48108

FRANK W JEFFRIES MD
425 E WASHINGTON ST
ANN ARBOR MI 48108

JOSEPH G JENDER MD
1302 W MAPLE ST
PLYMOUTH MI 48170

ROBERT E JENSEN MD A
UNIV MEDICAL CTR
ANN ARBOR MI 48104

B JIMENEZ MD R
2325 DEVONSHIRE
ANN ARBOR MI 48104

ROBT D JOHNSON MD
3432 WOODLEA DR
ANN ARBOR MICH 48103

FRANKLIN D JOHNSTON MD
UNIVERSITY HOSPITAL
ANN ARBOR MICH 48104

SYDNEY JOSEPH MD
P O BOX 1127
ANN ARBOR MI 48106

FRANCIS P JUDGE MD A
UNIV OF MICHIGAN
NEUROLOGY DEPT
ANN ARBOR MI 48104

RICHARD D JUDGE MD
UNIV MEDICAL CENTER
ANN ARBOR MICHIGAN 48104

THEODORE G KABZA MD
326 N INGALLS
ANN ARBOR MICHIGAN 48104

EDGAR A KAHN MD L
500 BURSON PL
ANN ARBOR MICH 48104

ARNOLD H KAMBLY JR MD
201 S MAIN ST
ANN ARBOR MICH 48108

HERBERT KAUFER MD
UNIV MEDICAL CTR
ANN ARBOR MI 48104

FRANK V KEARY MD A
1760 WASHTENAW AVE
YPSILANTI MI 48197

ALAN L KEATON MD A
1122 CRESTRIDGE
KILLEEN TX 76541

PAUL A KELLEY MD
326 N INGALLS
ANN ARBOR MICHIGAN 48104

DAVID C KEM MD M
TRIPLER GEN HOSP
APO SAN FRANCISCO CA 96438

W R KEMP JR MD
8124 MAIN ST
DEXTER MICH 48130

A C KERLIKOWSKE MD L
7111 S RIVERSIDE DR
MARINE CITY MI 48039

WHEELER H KERN MD
2011 MIDDLEBELT RD
GARDEN CITY MICHIGAN 48135

ROBERT L KERRY MD
340 BARTON NORTH DR
ANN ARBOR MICHIGAN 48105

JAMIL KHEDER MD
44526 CLARE BLVD
PLYMOUTH MICHIGAN 48170

CHONGJIN KIM MD
PLY STATE TRAIN HOME
NORTHVILLE MI 48176

WM W KIMBROUGH MD
1230 FAIR OAKS PKWY
ANN ARBOR MICHIGAN 48104

GLENN W KINDT MD
UNIV MEDICAL CTR
ANN ARBOR MI 48104

LOUIS P KIVI MD
5950 W TEXTILE RD
SALINE MI 48176

EDWARD W KLEIN MD
ST JOSEPH MERCY HOSP
ANN ARBOR MI 48104

LEO A KNOLL MD R
2002 SCOTTWOOD
ANN ARBOR MI 48104

GEO H KOEPKE MD
UNIVERSITY HOSPITAL
ANN ARBOR MICH 48104

EMRE KOKMEN MD
UNIV MEDICAL CENTER
ANN ARBOR MI 48104

KENNETH A KOOI MD
2132 NEEDHAM RD
ANN ARBOR MICHIGAN 48104

RICHARD O KRAFT MD
959 MAIDEN LANE
ANN ARBOR MI 48105

CHAS F KRAUSSE MD
116 PARK ST
CHELSEA MICHIGAN 48118

EDMUND M KRIGBAUM MD
3075 OVERRIDGE DR
ANN ARBOR MICHIGAN 48104

GLEN H KUMASAKA MD
1411 HARBROOKE
ANN ARBOR MICHIGAN 48103

STEPHEN K KWASS MD M
U S NAVAL HOSP
BETHESDA MARYLAND 20014

ISADORE LAMPE MD
1313 E ANN ST
ANN ARBOR MICH 48104

JACK LAPIDES MD
UNIVERSITY HOSPITAL
ANN ARBOR MICH 48104

JOHN L LAW MD R
1116 41ST AVE E
SEATTLE WA 98102

GLENN O LEASE MD
3460 COTTONTAIL LANE
ANN ARBOR MI 48103

FRED LEE MD
1926 DAY ST
ANN ARBOR MI 48104

KENNETH J LEVIN MD
UNIV MEDICAL CTR
ANN ARBOR MI 48104

S M LINDENAUER MD
2711 ANTIETAM COURT
ANN ARBOR MI 48105

R W LINGENFELTER MD
2006 ROOSEVELT BLVD
YPSILANTI MI 48197

DIANA LITTLE MD
2200 FULLER RD
ANN ARBOR MI 48105

GAIL ANN LOCKEN MD
8255 W HURON RIVER DR
DEXTER MI 48130

HAROLD J LOCKETT MD
319 BROOKSIDE DR
ANN ARBOR MICH 48105

ROBERT G LOVELL M D
326 N INGALLS ST
ANN ARBOR MICHIGAN 48104

GEO H LOWREY MD
UNIVERSITY HOSP
ANN ARBOR MICH 48104

CLAUD M LOWRY MD
1707 SHADFORD RD
ANN ARBOR MICH 48104

ALEXANDER R LUCAS MD
951 E LAFAYETTE
DETROIT MI 48207

KENNETH R MAGEE M D
1313 E ANN ST
ANN ARBOR MICH 48104

JOHN E MAGIELSKI MD
2355 LONDONDERRY RD
ANN ARBOR MICH 48104

HAROLD J MAGNUSON MD
SCHOOL OF PUBLIC HLTH
ROOM 1522
ANN ARBOR MI 48104

DUNCAN J J MAGOON MD
225 E LIBERTY
ANN ARBOR MI 48108

KARL D MALCOLM MD
311 N INGALLS ST
ANN ARBOR MICH 48104

JOHN E MALEY MD
5441 WALSH RD
WHITMORE LAKE MICH 48189

JOHN C MALL MD
16000 SHELDON RD
NORTHVILLE MI 48167

PHILIP M MARGOLIS MD
725 CITY CENTER BLDG
ANN ARBOR MI 48108

SHELDON F MARKEL MD
ST JOSPEH MERCY HOSP
ANN ARBOR MI 48104

MARK MARSHALL MD L
1803 SOUTH BLVD
ANN ARBOR MI 48104

WILLIAM MARTEL MD
2972 PARKRIDGE
ANN ARBOR MI 48103

DONALD W MARTIN MD
5 NORTH HAMILTON ST
YPSILANTI MICH 48197

JOYCE W MASON M D
1908 SCOTTWOOD
ANN ARBOR MICH 48104

STEPHEN C MASON III MD
820 E UNIVERSITY
ANN ARBOR MICH 48104

KENNETH P MATHEWS MD
1145 ABERDEEN DR
ANN ARBOR MICH 48104

WOLFGANG W MAY MD
BOX A
YPSILANTI MI 48197

VINCENT MAZZARELLA MD
207 FLETCHER
ANN ARBOR MI 48104

DAVID R MC CUBBREY MD
221 N SHELDON RD
PLYMOUTH MI 48170

T J MC DONNELL MD A
UNIV MEDICAL CENTER
ANN ARBOR MI 48104

THOS H MC EACHERN MD
BOX 826
CHINLE ARIZONA 86503

JAMES A MCLEAN MD
1313 E ANN ST
ANN ARBOR MICH 48104

MALCOLM MCPHEE MD A
1308 PHAIR AVE NE
ALBERTA CANADA
CALGARY 61

JOHN R MC WILLIAMS MD
201 S MAIN ST
ANN ARBOR MICH 48108

JOSEPH M MEADOWS JR MD
2685 OVERRIDGE DR
ANN ARBOR MICH 48104

LOUIS W MEEKS MD
UNIVERSITY HOSPITAL
ANN ARBOR MI 48104

PARVIZ MEGHNOT MD
740 EMERICK
YPSILANTI MI 48197

DAVID H MIDDLETON MD
UNIV OF MICH MED CTR
ANN ARBOR MICHIGAN 48104

WM K MILES MD A
UNIVERSITY HOSP
ANN ARBOR MI 48104

A F MILFORD JR M D
419 E MICHIGAN AVE
YPSILANTI MICHIGAN 48197

BARRY MILLER MD
326 N INGALLS
ANN ARBOR MI 48104

NORMAN F MILLER MD L
R 2 BOX 390
FLORENCE WI 54121

GEO W MORLEY MD
UNIVERSITY HOSP
ANN ARBOR MICH 48104

JOE D MORRIS MD
1313 E ANN ST
ANN ARBOR MI 48104

AMIR M MOSTAGHIM MD
2005 ROOSEVELT
YPSILANTI MI 48197

ROBERT H MOYAD MD
730 TOWNER
YPSILANTI MI 48197

JOHN MOYYAD MD
740 S EMERICK ST
YPSILANTI MICHIGAN 48197

WM A MURRAY MD
1705 COVINGTON DR
ANN ARBOR MICH 48103

WILLIAM J MURRAY MD
UNIV MEDICAL CENTER
ANN ARBOR MI 48104

JAMES W MYERS MD
217 N INGALLS
ANN ARBOR MI 48104

REED M NESBIT MD L
U OF M MED CTR #303
ANN ARBOR MI 48104

CHAS W NEWTON JR MD
2310 E STADIUM BLVD
ANN ARBOR MICH 48104

RICHARD D NICHOLS MD
HENRY FORD HOSP
DEPT OF OTO
DETROIT MI 48202

FAZLOLAH A NICKHAH MD
1320 ELLIS RD
YPSILANTI MI 48197

R H NISHIYAMA MD
2305 VINEWOOD
ANN ARBOR MI 48104

JOHN C NIXON MD
1155 GREEN RD
ANN ARBOR MICHIGAN 48105

RUDOLF E NOBEL MD
612 S FOREST
ANN ARBOR MICH 48104

GERALD A O CONNOR MD
ST JOSEPH MERCY HOSP
ANN ARBOR MICH 48104

PATRICIA A O CONNOR MD
110 MASON
ANN ARBOR MI 48103

JOHN OLARIU MD
BOX A
YPSILANTI MICHIGAN 48197

WILLIAM R OLSEN MD
6 BUCKINGHAM CT
ANN ARBOR MI 48104

ROBERT M ONEAL MD
555 E WILLIAM #25J
ANN ARBOR MI 48108

JAMES B ORWIG MD A
1867 FT STOCKTON DR
SAN DIEGO CA 92103

L D OSTRANDER JR MD
2793 MANCHESTER RD
ANN ARBOR MICHIGAN 48104

GENA R PAHUCKI MD
940 MAIDEN LANE
ANN ARBOR MI 48105

ALGERNON A PALMER MD L
110 E MIDDLE ST
CHELSEA MI 48118

MARIA J PALUSZNY MD
CHILDREN S PSYCH HOSP
ANN ARBOR MI 48104

PARVIZ PANAHI MD
2355 E STADIUM BLVD
ANN ARBOR MI 48104

MICHAEL PAPO MD
775 S MAIN ST
CHELSEA MI 48118

WALTER G PARKER MD A
745 BROOKS ST
ANN ARBOR MI 48103

FRANCIS C PASLEY MD
18471 HAGGERTY RD
NORTHVILLE MI 48167

SATYA P PASRICHA MD
YPSILANTI STATE HOSP
YPSILANTI MI 48197

FRED E PATTERSON MD
ST JOSEPH MERCY HOSP
ANN ARBOR MI 48104

BEVERLY C PAYNE MD
425 E WASHINGTON ST
ANN ARBOR MICHIGAN 48108

DELBERT E PEARSON MD
4660 WASHTENAW
ANN ARBOR MI 48104

MARLIN J PEARSON MD
2205 LAFAYETTE
ANN ARBOR MI 48104

JACK M PERLMAN MD
2664 ANTIETAM CT
ANN ARBOR MI 48105

EDWIN P PETERSON MD
L-2212 WOMENS HOSP
ANN ARBOR MI 48104

THOMAS R PETERSON MD
2015 MANCHESTER RD
ANN ARBOR MICH 48104

GUST C PETROPOULOS MD
2104 BROCKMAN BLVD
ANN ARBOR MI 48104

ROSWELL R PFISTER MD A
RETINA FOUNDATION
243 CHARLES ST
EAR & EYE INFIRMARY
BOSTON MASS 02114

RICHARD E PFRENDER MD M
MADIGAN GENERAL HOSP
TACOMA WA 98431

CONRAD L PICKETT MD
YPSILANTI STATE HOSP
YPSILANTI MI 48197

EDWIN H PLACE MD R
2616 HAWTHORN RD
ANN ARBOR MI 48104

H MARVIN POLLARD MD
2012 VINEWOOD BLVD
ANN ARBOR MICH 48104

JOHN C POLLARD MD
3240 W HURON RIVER DR
ANN ARBOR MI 48103

GERALD L PORTNEY MD M
PHS INDIAN HOSPITAL
DEPT HEW

FORT DEFIANCE ARIZ 86504

ROGER W POSTMUS MD
662 WEMBLEY CT
ANN ARBOR MICHIGAN 48103

MARCIA L POTTER MD
318 W CROSS ST
YPSILANTI MICH 48197

RHODA M POWSNER MD
1050 WALL ST
ANN ARBOR MI 48105

ANDREW K POZNANSKI MD
UNIV HOSP RADIOLOGY
ANN ARBOR MI 48104

LAWRENCE PREUSS MD
2133 DELAWARE DRIVE
ANN ARBOR MICHIGAN 48103

GORDON J PROUT MD
401 MILLS RD
SALINE MICH 48176

HUGO QUIROZ MD
26585 13 MILE RD
FRANKLIN MI 48025

JAMES W RAE JR MD
1313 E ANN ST
ANN ARBOR MICH 48104

HENRY K RANSOM MD L
721 SOUTH FOREST
ANN ARBOR MICH 48104

THEOPHILE RAPHAEL MD L
430 HILLSPUR
ANN ARBOR MI 48105

ROBERT RAPP MD
1460 CEDAR BEND DR
ANN ARBOR MI 48105

RIGDON K RATLIFF MD
326 N INGALLS ST
ANN ARBOR MICH 48104

WM J REGAN JR MD
326 N INGALLS
ANN ARBOR MICH 48104

ROBT C REHNER MD
2378 E STADIUM BLVD
ANN ARBOR MICHIGAN 48104

RUDOLPH E REICHERT JR
1046 BALDWIN
ANN ARBOR MICH 48104

MELVIN J REINHART MD
1921 HAMPTON CT
ANN ARBOR MICHIGAN 48103

WM R REKSHAN MD
47558 N SHORE DR
BELLEVILLE MI 48111

ELIZABETH J RICH MD

PEDLAR MILLS VA 24574

KATHRYN E RICHARDS MD
812 KUEBLER DR
ANN ARBOR MI 48103

DONALD D RIKER MD
706 W HURON
ANN ARBOR MI 48103

FRANK N RITTER MD
2675 ENGLAVE DR
ANN ARBOR MICH 48103

AMES ROBEY MD
BOX 2060
ANN ARBOR MI 48104

ORLO J ROBINSON JR MD
501 DUNLAP
NORTHVILLE MICH 48167

WM D ROBINSON MD
1405 E ANN ST
ANN ARBOR MICH 48104

C HOWARD ROSS MD L
1725 GLASTONBURY
ANN ARBOR MI 48103

DONALD L RUCKNAGEL MD
1141 CLAIRE CIRCLE
ANN ARBOR MICHIGAN 48103

SAM F RUSSO MD
9551 MAIN ST
WHITMORE LAKE MICH 48189

GARY S SANDALL MD
611 CHURCH ST
ANN ARBOR MI 48104

JAMES R SAUER MD A
315 HAZELWOOD AVE
ANN ARBOR MI 48103

ALLEN SAUNDERS MD
2361 E STADIUM BLVD
ANN ARBOR MICH 48104

GEO S SAYRE MD
27 S PROSPECT
YPSILANTI MICH 48197

DONALD L SCHAEFER MD
201 E LIBERTY
ANN ARBOR MICHIGAN 48108

EVE M SCHLECTE MD
2307 HIGHLAND RD
ANN ARBOR MI 48104

C M SCHMIDT MD
959 MAIDEN LANE
ANN ARBOR MI 48105

DAVID W SCHMIDT MD
1230 N MAPLE RD
ANN ARBOR MI 48103

GERARD M SCHMIT MD
555 E WILLIAM
ANN ARBOR MI 48108

RICHARD C SCHNEIDER MD
1313 E ANN ST DEPT N S
ANN ARBOR MICH 48104

HENRY K SCHOCH MD
VETS ADMIN HOSP
ANN ARBOR MI 48105

MARVIN E SCHROCK MD
2310 E STADIUM BLVD
ANN ARBOR MI 48104

EVA P SCHROEDER MD A
YPSILANTI STATE HOSP
YPSILANTI MI 48197

WM E SCHUMACHER MD L
303 1ST NATIONAL BLDG
ANN ARBOR MI 48108

HERBERT SCHUNK MD
1061 COUNTRY CLUB DR
BLOOMFIELD HILLS MI 48013

S A SCHWARTZ CAPT MC M
130TH GEN HOSP APO
NEW YORK N Y 09696

HENRY A SCOVILL MD
1313 W CROSS ST
YPSILANTI MICH 48197

MAURICE H SEEVERS MD
740 SPRING VALLEY DR
ANN ARBOR MICH 48105

MARIA Z SEGAT MD
455 HUNTINGTON DRIVE
ANN ARBOR MICH 48104

MELVIN L SELZER MD
1201 RED OAK RD
ANN ARBOR MICH 48103

JAMES D SHADOAN MD
314 WASHINGTON ST
CHELSEA MI 48118

MOHAMMAD SHAFII MD A
CHILDRENS PSYCH HOSP
ANN ARBOR MI 48104

JULES SHAMMAS MD
2260 PRAIRIE
ANN ARBOR MI 48105

M L SHEARER JR MD
8044 DXTR PINCKNEY RD
DEXTER MICHIGAN 48130

M R SHEARER MD
8044 DXTR PINCKNEY RD
DEXTER MICHIGAN 48130

ROBERT A SHEIMAN MD A
UNIV MEDICAL CTR
ANN ARBOR MI 48104

JOHN C SHELTON MD
105 FERRIS
YPSILANTI MICHIGAN 48197

W W SHERVINGTON MD A
2794 PAGE ST
ANN ARBOR MI 48104

HARRIET L SHOECRAFT MD
425 E WASHINGTON
ANN ARBOR MICHIGAN 48108

LOUIS E SIGLER JR MD
1443 COVINGTON DR
ANN ARBOR MICH 48103

JOHN F SIMPSON MD
DEPT OF NEUROLOGY
UNIV OF MICH HOSP

ANN ARBOR MI 48104

L R SIMSON CAPT MC M
112 CHILDRESS
SHEPPARD AFB TX 76311

OLGA SIROLA MD
1710 COLLEGEWOOD
YPSILANTI MICH 48197

JAMES C SISSON MD
2665 BALMORAL CT
ANN ARBOR MICHIGAN 48103

VERGIL N SLEE MD
P O BOX 1809
ANN ARBOR MICH 48106

JOHN W SMILLIE MD
1335 FAIRLANE DR
ANN ARBOR MICH 48104

DONALD C SMITH MD
326 VICTOR VAUGHAN BLG
ANN ARBOR MI 48104

EDWIN M SMITH MD
1815 ARBORDALE
ANN ARBOR MICH 48103

ELEANOR SMITH MD
425 E WASHINGTON ST
ANN ARBOR MICHIGAN 48108

RUSSELL F SMITH M D
9569 MAIN ST
WHITMORE LAKE MI 48189

THOMAS C SMITH MD
2800 PLYMOUTH RD
ANN ARBOR MI 48106

WILLIAM S SMITH MD
C4202 UNIVER MED CTR
ANN ARBOR MICHIGAN 48104

JAMES SONNEGA MD
HAWTHORN CENTER
NORTHVILLE MI 48167

EVANGELINE SPINDLER MD A
UNIV OF MICH CPH
ANN ARBOR MI 48104

BERYL B SPRUCE MD
207 FLETCHER
ANN ARBOR MI 48104

MAYNARD L STETTEN MD M
CLARK AFB APO
USAF HOSPITAL BOX 136

SAN FRANCISCO CA 96274

GEORGINE M STEUDE MD
1450 BARDSTOWN
ANN ARBOR MI 48105

LYALL C STILP II MD A
1525 MARION
ANN ARBOR MI 48103

CYRUS W STIMSON MD
235 E 78TH ST
NEW YORK N Y 10021

GERALD L STOKER MD
326 N INGALLS ST
ANN ARBOR MI 48104

WINNIFRED E STOREY MD A
2311 E STADIUM BLVD
ANN ARBOR MI 48104

RUTH H STRANG MD
4500 E HURON RIVER DR
ANN ARBOR MI 48104

GEO J STRASCHNOV MD
1678 MERRIMAN RD
WAYNE MICHIGAN 48184

STANLEY R STRASIUS MD A
ST JOSEPH MERCY HOSP
ANN ARBOR MI 48104

JAMES N P STRUTHERS MD L
17617 EDINBOROUGH RD
DETROIT MI 48219

BRUCE T STUBBS MD
775 S MAIN ST
CHELSEA MICHIGAN 48118

ROBT B SWEET MD
1313 E ANN ST
ANN ARBOR MICH 48104

FULTON B TAYLOR MD
8898 ACRONE AVE
MILAN MI 48160

WM B TAYLOR MD
326 N INGALLS
ANN ARBOR MICHIGAN 48104

R WALLACE TEED MD
215 S MAIN
ANN ARBOR MICH 48108

KENNETH W TEICH MD
1500 FIFTH AVE
MCKEESPORT HOSP
MCKEESPORT PA 15132

E THURSTON THIEME MD
ST JOSEPH MERCY HOSP
ANN ARBOR MI 48104

GEORGE R THOMPSON MD
2656 PARKRIDGE DR
ANN ARBOR MICH 48103

WM C THOMPSON 111 MD
117 N WASHINGTON ST
YPSILANTI MI 48197

BARBARA A THREATT MD
U OF M HOSP RADIOLOGY
ANN ARBOR MI 48104

JOHN B TIPTON MD
500 S PALM CANYON DR
PALM SPRINGS CA 92262

JOSEPH J TIZIANI MD
3412 BRASSOW
SALINE MI 48176

BERHAN I TOSUNER MD
1553 KING GEORGE BLDG
ANN ARBOR MI 48104

W W TOURTELLOTTE MD
UNIVERSITY HOSP
ANN ARBOR MICH 48104

HARRY A TOWSLEY MD
W-5610 UNIV HOSP
ANN ARBOR MI 48104

J G TURCOTTE MD
769 HEATHERWAY
ANN ARBOR MICHIGAN 48104

JERROLD G UTSLER MD
ST JOSEPH MERCY HOSP
ANN ARBOR MI 48104

W C VANDER YACHT MD
203 RUSSELL ST
SALINE MI 48176

VERNE L VAN DUZEN MD L
131 E MILLER
MILAN MI 48160

WIECHER H VANHOUTEN MD
UNIV MEDICAL CTR
ANN ARBOR MI 48104

F S VAN REESEMA MD
1608 KIRTLAND DR
ANN ARBOR MI 48103

NEAL A VANSELOW MD
2906 PARKRIDGE DR
ANN ARBOR MI 48103

JOHN J VOORHEES MD
UNIV MEDICAL CTR
ANN ARBOR MI 48104

PIETER D VREEDE MD
PARKE DAVIS & CO
ANN ARBOR MI 48105

R WALTER WAGGONER MD
3333 GEDDES RD
ANN ARBOR MICH 48105

R W WAGGONER JR MD A
1421 BARNARD
ANN ARBOR MI 48103

ALEXANDER M WALDRON MD
309 N INGALLS
ANN ARBOR MICH 48104

JERRY L WALDYKE MD
775 S MAIN ST
CHELSEA MI 48118

JULIUS M WALLNER MD
1313 E ANN ST
ANN ARBOR MICH 48104

RICHARD D WATKINS MD
4140 MILLER
ANN ARBOR MI 48103

ERNEST H WATSON MD R
834 SUNSET DR
EVANSVILLE IND 47713

WALTER L WEBB MD
ST JOSEPH MERCY HOSP
ANN ARBOR MI 48104

MYRON E WEGMAN MD
UNIV OF MICH
ANN ARBOR MICHIGAN 48104

RAOUL L WEISMAN MD
21 SO PROSPECT
YPSILANTI MICH 48197

JOHN M WELLER M D
B2915 UNIVERSITY HOSP
ANN ARBOR MICHIGAN 48104

JAMES L WERTH MD A
U OF M HOSPITAL
ANN ARBOR MI 48104

GEO W WESTCOTT MD
511 W MICHIGAN
YPSILANTI MI 48197

MARTHA R WESTERBERG MD
1313 E ANN ST
ANN ARBOR MI 48104

CHAS J WESTOVER MD
1340 ELM
PLYMOUTH MI 48170

ROBT G WETTERSTROEM MD
501 W DUNLAP
NORTHVILLE MICH 48167

ARNOLD H WEXLER CAPTMC M
34TH TAC HOSPITAL
TAC ENGLAND AFB
ALEXANDRIA LA 71301

EDMUND H WHALE MD
207 FLETCHER AVE
ANN ARBOR MICH 48104

W M WHITEHOUSE MD
1313 E ANN STREET
ANN ARBOR MICHIGAH 48104

MARIANNE WHOWELL MD
1805 IVYWOOD DR
ANN ARBOR MICHIGAN 48103

PAUL J WICHT MD
27 S PROSPECT
YPSILANTI MICH 48197

HOWARD R WILLIAMS MD
1950 MANCHESTER RD
ANN ARBOR MICH 48104

FREDK B WILLIAMSON MD
319 W MICHIGAN AVE
YPSILANTI MICH 48197

PARK W WILLIS III MD
UNIVERSITY HOSPITAL
ANN ARBOR MICH 48104

J ROBERT WILLSON MD
UNIV MED CENTER
ANN ARBOR MICHIGAN 48104

J LEROY WILSON MD L
1313 E ANN ST
ANN ARBOR MICH 48104

JAMES M WINKLER MD
3 REGENT COURT
ANN ARBOR MICH 48104

CHARLES L WISCHMAN MD M
353 FULTON STREET
SEATTLE WA 98109

J REIMER WOLTER MD
UNIVERSITY MED CENTER
ANN ARBOR MICHIGAN 48104

R T WOODBURNE PHD A
2520 HAWTHORNE RD
ANN ARBOR MI 48104

SCOTT W WOODS MD
750 TOWNER
YPSILANTI MICHIGAN 48197

BRUCE A WORK JR MD
L-2019 WOMENS HOSP
ANN ARBOR MI 48104

WALTER P WORK MD
UNIVERSITY MED CENT
ANN ARBOR MICHIGAN 48104

MELISSA H C WORTH MD L
3211 PACKARD RD
ANN ARBOR MI 48104

HAROLD L WRIGHT MD
18741 HAGGERTY
NORTHVILLE MICHIGAN 48167

JOHN S WYMAN MD
SNOW HLTH SERVICE-EMU
YPSILANTI MI 48197

WILLIAM C YAROCH MD
2200 FULLER RD
ANN ARBOR MI 48105

FRANK S YELIN MD A
TEXAS MEDICAL CENTER
DIV OF NEUROSURGERY
HOUSTON TEXAS 77025

GRUS R YODER MD L
700 CAMBRIDGE RD
YPSILANTI MI 48197

C J D ZARAFONETIS MD
SIMPSON MEMORIAL INST
ANN ARBOR MI 48106

VICTOR M ZERBI MD
27 S PROSPECT
YPSILANTI MICH 48197

JOEL P ZRULL MD
630 DARTMOOR
ANN ARBOR MICHIGAN 48103

E K ZSIGMOND MD
UNIVERSITY OF MICH
ANN ARBOR MI 48104

WEXFORD-MISSAUKEE

R E ANDERSON MD
615 OAK STREET
CADILLAC MI 49601

ROBERT F BARNETT MD
MERCY HOSPITAL
CADILLAC MICHIGAN 49601

M D BENTLEY MD
828 OAK ST
CADILLAC MICHIGAN 49601

JOHN P CANNON MD
107 1/2 N MITCHELL ST
CADILLAC MICHIGAN 49601

THOS H CARDINAL MD
212 S SIMONS
CADILLAC MICH 49601

ROBT V DAUGHARTY MD
107 N MITCHELL
CADILLAC MICH 49601

LAWRENCE O GARBER MD
222 HOWARD ST
CADILLAC MI 49601

JOHN C INMAN MD
LAKE CITY MICH 49651

KENNETH A KLEYN MD
105 1/2 N MITCHELL ST
CADILLAC MI 49601

ROBERT E PIERCE MD
1430 SUNNYSIDE DR
CADILLAC MICHIGAN 49601

MILLARD POSTHUMA MD
828 OAK ST
CADILLAC MICHIGAN 49601

IMBI RALYEA MD
119 RIVIERA DRIVE
ST CLAIR SHORES MI 48080

THOMAS F RICHMOND MD
604 LAKE SHORE DR
CADILLAC MI 49601

JAMES M SANDERSON MD
512 CHAPIN
CADILLAC MICHIGAN 49601

DEAN W SEGER MD
LAKE CITY MICH 49651

EDWARD STEHOUWER MD
828 OAK ST
CADILLAC MI 49601

CARLETON F TYRRELL DO O
MANTON MI 49663

DENNIS E VAN ALST MD
828 OAK ST
CADILLAC MICHIGAN 49601

ARNO WHIPPLE MD
RURAL STATION
MOORESTOWN MI 49651

DOUGLAS C YOUNGMAN MD
MARION MICHIGAN 49665

WAYNE

A ABBASSIAN MD
3815 PELHAM
DEARBORN MI 48124

JAMES A ABBOTT MD
810 MUTUAL BLDG
DETROIT MI 48226

GERALD J ABEN MD
15901 W 9 MILE RD
SOUTHFIELD MI 48075

ELIE D ABOULAFIA MD
18241 GREENFIELD
DETROIT MI 48235

JOS P ABRAHAM MD
2799 W GRAND BLVD
DETROIT MI 48202

JULIO B ACOSTA MD
27634 FIVE MILE RD
LIVONIA MI 48154

GERALD D ADAMIAN MD
15901 W 9 MILE RD
SOUTHFIELD MI 48075

JAMES R ADAMS MD A
39 SHADY HOLLOW DR
DEARBORN MI 48128

VINCENT B ADAMS MD
19641 MACK AVE
GROSSE PTE MI 48236

ARTHUR ADAMSKI MD
19600 VAN DYKE
DETROIT MI 48234

IRWIN P ADELSON MD A
DETROIT PSYCH INSTIT
1151 TAYLOR

DETROIT MI 48202

SIDNEY L ADELSON MD
16221 SCHOOLCRAFT
DETROIT MI 48227

SIDNEY ADLER MD
3011 W GRAND BLVD
DETROIT MI 48202

MANOOCHEHR AGAH MD
6765 ORCHARD LAKE RD
ORCHARD LAKE MI 48033

GEO H AGNEW MD
3011 W GRAND BLVD
DETROIT MI 48202

RICHARD C AGNEW MD M
564 FISHER BLDG
DETROIT MI 48202

EUGENE J AGNONE MD
799 BERKSHIRE
GROSSE PTE PARK MI 48230

JOSEPH J AGRESTA MD A
WAYNE STATE UNIV
DETROIT MI 48207

JAS J AIUTO MD
660 CADIEUX RD
GROSSE PTE MI 48230

ISSA S AJLOUNI MD
2075 E 14 MILE RD
BIRMINGHAM MI 48008

ROGER M AJLUNI MD
17920 FARM RD
LIVONIA MI 48152

CECIL AKROYD MD
16551 W WARREN
DETROIT MI 48228

EMIL J ALBAN JR MD
7940 ALLEN RD
ALLEN PARK MI 48101

A P ALBARRAN MD
WAYNE CO GEN HOSP
ELOISE MICH 48132

ALBERT J ALBRECHT MD
15901 W NINE MILE RD
SOUTHFIELD MI 48075

ELSA A ALCANTARA MD
9801 CONANT
DETROIT MI 48212

LUCILO C ALCANTARA MD
9801 CONANT
DETROIT MI 48212

ALLEN ALEXANDER MD
18881 HILTON
SOUTHFIELD MI 48075

EUGENE J ALEXANDER MD
34830 SPRINGVALLEY
WESTLAND MI 48185

G D ALEXANDER MD
25799 LATHRUP BLVD
SOUTHFIELD MI 48075

L C ALEXANDER MD
1204 KALES BLDG
DETROIT MI 48226

MANUEL A ALFONSO MD
20233 MACK
GROSSE PTE WOODS MI 48236

ELVIS S ALFORD MD
20 LIBERTY ST
BELLEVILLE MI 48111

SHAFQAT ALI MD
25210 GRAND RIVER
DETROIT MI 48240

ROBERT D ALLABEN MD
18255 W MCNICHOLS RD
DETROIT MI 48219

JOHN V ALLEN MD
1336 SOUTHFIELD RD
LINCOLN PARK MI 48146

HERBERT C ALLISON MD L
383 FISHER RD
DETROIT MI 48236

MUFID B AL-NAJJAR MD A
NORTHVILLE STATE HOSP
NORTHVILLE MI 48167

E BRYCE ALPERN MD
2840 W 7 MILE RD
DETROIT MI 48221

SAM ALPINER MD
2850 E SEVEN MILE RD
DETROIT MI 48234

MUHYI H AL-SARRAF MD
4160 JOHN R ST
DETROIT MI 48201

JULES ALTMAN MD
14633 E SEVEN MILE RD
DETROIT MI 48205

RAPHAEL ALTMAN MD
17000 WEST 8 MILE RD
SOUTHFIELD MI 48075

HERNAN ALVAREZ JR MD
HENRY FORD HOSP
DETROIT MI 48202

JULIAN ALVAREZ MD
260 LAKELAND
GROSSE PTE MI 48236

VICTOR M ALVAREZ MD
3745 MONROE
DEARBORN MI 48124

ROMULO S ANCOG MD
1151 TAYLOR
DETROIT MI 48202

BEVERLY L ANDERSON MD
977 SEXTON RD
HOWELL MI 48843

CHAS P ANDERSON MD
MEDICAL DIRECTOR
DEPT OF SOCIAL SERV
640 TEMPLE AVE
DETROIT MI 48201

EUGENE C ANDERSON MD
14801 SOUTHFIELD
ALLEN PARK MI 48101

WALTER L ANDERSON MD
1553 WOODWARD AVE
DETROIT MI 48226

WM B ANDERSON MD
966 FISHER BLDG
DETROIT MI 48202

BYRON ANDREOU MD
460 EASTLAND CTR
HARPER WOODS MI 48237

RAHSAN ANISOGLU MD
18126 SHADBROOK
NORTHVILLE MI 48167

DOMENICO M ANNESSA MD L
3536 BURNS AVE
DETROIT MI 48214

MARY K ANSLEY MD
1101 DAV WHITNEY BLDG
DETROIT MI 48226

RICHARD D ANSLOW MD
1515 DAV WHITNEY BLDG
DETROIT MI 48226

HOWARD B APPELMAN MD
1553 WOODWARD AVE
DETROIT MI 48226

AGUSTIN ARBULU MD
1400 CHRYSLER FREEWAY
DETROIT MI 48207

RENE F ARCHAMBAULT MD
35550 MICHIGAN AVE
WAYNE MI 48184

EDUARDO ARCINIEGAS MD
HENRY FORD HOSP
DETROIT MI 48202

BURKE W AREHART MD
340 EASTLAND BLDG
DETROIT MI 48236

NORMAN J ARENDS MD
302 EASTLAND PROF BLDG
DETROIT MI 48236

JOHN G ARENT MD
12600 1/2 GR RIVER AVE
DETROIT MI 48204

MOHAMMAD A ARIANI MD
EASTLAND PROF BLDG 314
HARPER WOODS MI 48225

C T ARIES MD
27216 CECILE AVE
DEARBORN HEIGHTS MI 48127

ULVE E ARIES MD
HERMAN KIEFER HOSP
DETROIT MI 48202

SEVERO R ARMADA JR MD
32900 FIVE MILE RD
LIVONIA MI 48154

THOS C ARMINSKI MD
1066 FISHER BLDG
DETROIT MI 48202

MAC J ARMSTRONG MD
441 E JEFFERSON AVE
DETROIT MI 48226

A ROBERT ARNSTEIN MD
285 HAWTHORNE
BIRMINGHAM MI 48009

MORRIS ARNKOFF MD
18241 GREENFIELD
DETROIT MI 48235

WM J ARNOLD JR MD
12062 BROAD ST
DETROIT MI 48204

FORREST J ARNOLDI MD
HARPER HOSPITAL
DETROIT MI 48201

ROBYN J ARRINGTON MD
7811 OAKLAND AVE
DETROIT MI 48211

MEYER S ASCHER MD
1508 DAV BRODERICK TWR
DETROIT MI 48226

STILSON R ASHE MD L
23030 CHERRY HILL
DEARBORN MI 48124

LOWELL B ASHLEY MD R
5811 N E 21 RD
FT LAUDERDALE FL 33308

REGIS F ASSELIN MD
11417 WHITTIER
DETROIT MI 48224

MOHAMMED A ASSI MD
18161 W 12 MILE RD
LATHRUP VILLAGE MI 48075

MAX E AUBLE MD
15901 W NINE MILE RD
SOUTHFIELD MI 48075

HARRY E AUGUST MD L
26339 WOODWARD
HUNTINGTON WOODS MI 48070

DONALD C AUSTIN MD
3800 WOODWARD AVE
DETROIT MI 48201

SHIRLEY AUSTIN MD
5224 ST ANTOINE ST
DETROIT MI 48202

JOHN D AUSUM MD
16311 MIDDLEBELT
LIVONIA MI 48154

IRA AVRIN MD
24777 GREENFIELD RD
SOUTHFIELD MI 48075

ARNOLD R AXELROD MD
15001 W EIGHT MILE RD
DETROIT MI 48235

MILDRED A AXELROD MD
3535 W 13 MILE RD 305
ROYAL OAK MI 48072

MANUEL AZUARA MD
19150 KELLY RD
DETROIT MI 48236

LLOYD K BABCOCK MD L
5555 CRABTREE RD
BIRMINGHAM MI 48010

MYRA E BABCOCK MD L
7 POPLAR PARK
PLEASANT RIDGE MI 48069

PAUL W BABCOCK MD
29584 FIVE MILE RD
LIVONIA MI 48154

WARREN W BABCOCK MD R
2661 NORTH EAST 9TH CT
POMPANO BEACH FL 33062

WALTER F BACH MD L
23369 LONGVIEW
DEARBORN HGHTS MI 48127

BURTON J BACHER M D
1015 KALES BLDG
DETROIT MI 48226

MORRIS E BACHMAN MD L
17000 W EIGHT MILE RD
SOUTHFIELD MI 48075

VINTON A BACON MD L
18400 LIVERNOIS
DETROIT MI 48221

BENJ H BADER MD
2654 W GRAND BLVD
DETROIT MI 48208

ARTHUR J BADY MD M
GRACE HOSPITAL
DETROIT MI 48201

MARGA BAER MD
16321 MACK AVE
DETROIT MI 48224

WALTER BAER MD
16321 MACK AVENUE
DETROIT MI 48224

HARRY E BAGLEY MD A
7541 OAKMAN BLVD
DEARBORN MI 48126

ROBT J BAHRA MD
20905 GREENFIELD
SOUTHFIELD MI 48075

LOUIS J BAILEY MD L
20905 GREENFIELD RD
SOUTHFIELD MI 48075

MARGARET A BAIMA MD
1212 DAV WHITNEY BLDG
DETROIT MI 48226

CLARENCE BAKER MD L
5946 EASY ST
BAYSHORE GARDENS K-34

BRADENTON FL 33505

JOHN D BAKER MD A
DETROIT GENERAL HOSP
DETROIT MI 48226

NIHAT BAKIRCI MD
2200 E GRAND BLVD
DETROIT MI 48211

JOSEPH A BAKST MD L
10 W WARREN
DETROIT MI 48201

FRANK T BALAGA MD
1840 HOLBROOK
DETROIT MI 48212

HARRY BALBEROR MD
22341 W 8 MILE RD
DETROIT MI 48219

MATTHEW A BALCERSKI MD
855 FISHER BLDG
DETROIT MI 48202

HECTOR A BALEIRON MD
263 S GRATIOT
MT CLEMENS MI 48043

DONALD R BALLARD MD
20520 AUDETTE
DEARBORN MI 48124

JANOS BALOG MD
2300 OAK ST
WYANDOTTE MI 48192

ROSS M BALOW MD
18700 MEYERS RD
DETROIT MI 48235

DONALD L BALTZ MD
24230 MICHIGAN
DEARBORN MI 48124

GERALD BANISH MD
23100 CHERRY HILL
DEARBORN MI 48124

THOMAS L BANKS MD
18597 W 10 MILE RD
SOUTHFIELD MI 48075

LEWIS R BARAK MD
20905 GREENFIELD RD
NORTHLAND MEDICAL BLDG
SUITE 503
SOUTHFIELD MI 48075

STUART BARAK MD
18241 GREENFIELD
DETROIT MI 48235

ALPHONSE W BARAN MD
15841 W WARREN ST
DETROIT MI 48228

LOUIS C BARBAGLIA MD
16378 HARPER
DETROIT MI 48224

RADIVOJ R BARBER MD
864 S MAIN ST
PLYMOUTH MI 48170

M B BARDENSTEIN MD
17000 W 8 MILE RD
SOUTHFIELD MI 48075

ALWIN S BAREFIELD MD
10244 W 7 MILE RD
DETROIT MI 48221

BENJ BARENHOLTZ MD
20905 GREENFIELD
SOUTHFIELD MI 48075

DAVID H BARKER MD
7220 GRATIOT AVE
DETROIT MI 48213

OSCAR BARLAND MD A
8401 WOODWARD AVE
DETROIT MI 48202

REUVEN BAR-LEVAV MD
726 FISHER BLDG
DETROIT MI 48202

MYRON BARLOW MD
18050 MACK
GROSSE PTE MI 48236

MORTON BARNETT MD
735 ARDMOOR RD
BIRMINGHAM MI 48010

DANIEL R BARR MD
1025 DAV WHITNEY BLDG
DETROIT MI 48226

RAYMOND J BARRETT MD
3800 WOODWARD #1202
DETROIT MI 48201

WYMAN D BARRETT MD L
362 MCKINLEY
GROSSE PTE FARMS MI 48236

JAMES BARRON MD
1229 THATCH PALM DR
BOCA RATON FL 33432

WM H BARRON MD A
2147 E MAPLE
BIRMINGHAM MI 48008

DAVID BARSKY MD
100 OAK ST
WYANDOTTE MI 48192

EDW G BARTHOLOMEW MD
SINAI HOSPITAL
DETROIT MI 48235

ROBERT J BARUCH MD
19181 CHELTON
BIRMINGHAM MI 48009

SIDNEY BASKIN MD
19630 W MCNICHOLS
DETROIT MI 48219

NAIL BASMAJI MD
19647 JOY RD
DETROIT MI 48228

JOSEPH S BASSETT MD
20905 GREENFIELD RD
SOUTHFIELD MI 48075

THOMAS M BATCHELOR MD
3790 WOODWARD AVE
DETROIT MI 48201

GAYLORD S BATES MD
861 MUNROE BLVD
DEARBORN MI 48124

JOHN M BATTLE MD
6904 CHARLESWORTH
DEARBORN HEIGHTS MI 48127

A ROBT BAUER MD L
19268 GRAND RIVER AVE
DETROIT MI 48223

BENEDICT J BAUER MD
16451 SCHOOLCRAFT
DETROIT MI 48227

LESTER E BAUER MD A
4 WOODSIDE PK
PLEASANT RIDGE MI 48069

RALPH E BAUER MD
HENRY FORD HOSPITAL
DETROIT MI 48202

RAYMOND B BAUER MD
HARPER HOSPITAL
DETROIT MI 48201

EVELYN F BAUGH MD
9191 WHITTIER
DETROIT MI 48224

RICHARD H BAUGH MD
24216 MICHIGAN AVE
DEARBORN MI 48124

ROBERT F BAUGH MD
9191 WHITTIER
DETROIT MI 48224

MOE BAUMER MD
10 PETERBORO
DETROIT MI 48201

ELDEN C BAUMGARTEN MD L
1062 LOCHMOOR BLVD
GROSSE PTE WOODS MI 48236

THOS W BAUMGARTEN MD
20867 MACK AVE
GROSSE PTE MI 48236

JOAQUIN P BAUTISTA MD M
20212 FLEMING
DETROIT MI 48234

SEYMOUR BAXTER MD
1160 FORREST LANE
BIRMINGHAM MI 48010

GILBERT M BAZIL MD
14200 PURITAN
DETROIT MI 48227

JOSEPH M BEALS MD
17894 MACK
GROSSE POINTE MI 48224

A DUANE BEAM MD
20160 MACK AVE
GROSSE PTE WOODS MI 48236

GEO D BEAMER MD
14853 MICHIGAN AVE
DEARBORN MI 48126

JAMES E BEARD MD
1365 CASS AVE
DETROIT MI 48226

JACQUES BEAUDOIN MD
17770 MACK
GROSSE POINTE MI 48224

STANLEY M BECK JR MD
GAYLORD STATE HOME
GAYLORD MI 49735

ABRAHAM BECKER MD
3790 WOODWARD AVE
DETROIT MI 48201

VICTORIA L BECKETT MD A
714 BLDG & LOAN BLDG
C/O ROSEMARY SCOTT

GRAND RAPIDS MI 49502

CLARENCE L BECKLEIN MD L
14351 E WARREN AVE
DETROIT MI 48215

HUGH BECKMAN MD
20001 GREENFIELD
DETROIT MI 48235

CARL C BECKWITH MD
15865 WYOMING
DETROIT MI 48238

WM L BEDWELL MD
1211 KALES BLDG
DETROIT MI 48226

WILLARD E BEEBE MD
7636 ALLEN RD
ALLEN PARK MI 48101

G JAN BEEKHUIS MD
1326 ST ANTOINE ST
DETROIT MI 48226

BILLY BEEKS MD
8824 PURITAN
DETROIT MI 48238

ROBT C BEHAN MD
1 WOODWARD AVE
DETROIT MI 48226

MAX R BEITMAN MD
510 KALES BLDG
DETROIT MI 48226

KHUSROW BEIZAI MD
22101 MOROSS RD
DETROIT MI 48236

JUAN BELAMARIC MD
1400 CHRYSLER EXPWY
DETROIT MI 48207

W GEO BELANGER MD
1041 HARVARD
DETROIT MI 48230

DARWIN F BELDEN MD
2424 PURITAN
DETROIT MI 48238

J KENNER BELL MD L
660 WOODWARD AVE
DETROIT MI 48226

CLAUDE BENAVIDES MD
25750 W OUTER DR
LINCOLN PARK MI 48146

SANDOR F BENDE MD
15863 GARFIELD
ALLEN PARK MI 48101

JOSEPH BENINSON MD
HENRY FORD HOSP
DETROIT MI 48202

HARRY B BENNETT MD L
7015 INTERVALE
DETROIT MI 48238

F STANLEY BENNETT MD
15101 SOUTHFIELD
ALLEN PARK MI 48101

RONALD S BENNETT MD
17727 W 10 MILE RD
SOUTHFIELD MI 48075

SANFORD A BENNETT MD
15301 W NINE MILE RD
OAK PARK MI 48237

W ROBERT C BENNETT MD
3800 WOODWARD AVE
DETROIT MI 48201

ARVIN BENNISH MD
17411 GREENFIELD
DETROIT MI 48235

CLIFFORD D BENSON MD
1553 WOODWARD AVE
DETROIT MI 48226

DAVIS A BENSON MD
17563 GREENFIELD
DETROIT MI 48235

PAUL J BENSON MD
227 N SHELDON RD
PLYMOUTH MI 48170

VIRGINIA M BENSON MD L
29224 LANCASTER BLDG 4
SOUTHFIELD MI 48075

ROBERT H BENTLEY MD
7220 GRATIOT AVE
DETROIT MI 48213

WM G BENTLEY MD
50 WESTMINSTER
DETROIT MI 48202

PEDRO P BERDAYES MD
15345 WINDMILL PTE DR
GROSSE PTE MI 48236

EDWIN L BERGER MD
7301 SCHAEFER RD
DEARBORN MI 48126

MURRAY S BERGMAN MD
4400 LIVERNOIS AVE
DETROIT MI 48210

THEODORE I BERGMAN MD
17660 W 12 MILE RD
SOUTHFIELD MI 48075

HOWARD L BERGO MD
901 W GRAND BLVD
DETROIT MI 48208

KENNETH BERGSMAN MD
DETROIT GENERAL HOSP
DETROIT MI 48226

ERNEST M BERKAS MD
3815 PELHAM RD
DEARBORN MI 48124

JOSEPH J BERKE MD
3333 E JEFFERSON
DETROIT MI 48207

SYDNEY S BERKE MD
3333 E JEFFERSON
DETROIT MI 48207

LARY R BERKOWER MD
20905 GREENFIELD
SOUTHFIELD MI 48075

ALLEN B BERLIN MD
17000 W 8 MILE RD
SOUTHFIELD MI 48075

MARTIN B BERMAN MD
7411 THIRD AVE
DETROIT MI 48202

ROBT H BERMAN MD L
2111 WOODWARD
DETROIT MI 48201

SIDNEY L BERMAN MD L
60 W HANCOCK
DETROIT MI 48201

HENRI BERNARD MD
414 DAV WHITNEY BLDG
DETROIT MI 48226

WALTER G BERNARD MD L
910 CHALMER
DETROIT MI 48215

BERNARD BERNBAUM MD L
13345 W SIX MILE RD
DETROIT MI 48235

SAML S BERNSTEIN MD
15901 W 9 MILE RD
SOUTHFIELD MI 48075

CONRAD F BERNYS MD
3815 PELHAM
DEARBORN MI 48124

WILLIAM L BERRIDGE MD
CHEVROLET MOTOR CO
LIVONIA MI 48151

JOS E BERRY MD
19242 W 7 MILE RD
DETROIT MI 48219

KARL R BERTRAM MD
461 FISHER BLDG
DETROIT MI 48202

JOHN H BESANCON MD R
8900 JEFFERSON AVE#320
DETROIT MI 48214

THOS H E BEST MD L
9221 E JEFFERSON AVE
DETROIT MI 48214

G BETANZOS MD
22770 KELLY
E DETROIT MI 48021

KUNJLATA M BHATT MD
SINAI HOSPITAL
DETROIT MI 48235

MICHAEL H BIALIK MD
14853 MICHIGAN AVE
DEARBORN MI 48126

FRANK B BICKNELL MD
938 DAV WHITNEY BLDG
DETROIT MI 48226

JOHN G BIELAWSKI MD
825 DAVID WHITNEY BLDG
DETROIT MI 48226

JOHN H BIHL MD
10531 FARMINGTON RD
LIVONIA MI 48150

HERBERT E BILL MD
3506 GRATIOT
DETROIT MI 48207

THOS H BILLINGSLEA MD
3790 WOODWARD
DETROIT MI 48202

RICHARD J BING MD
HUNTINGTON MEM HOSP
100 CONGRESS ST

PASADENA CA 91105

PHILIP M BINNS MD
573 FISHER BLDG
DETROIT MI 48202

JOHN R BIRCH MD L
633 DAV WHITNEY BLDG
DETROIT MI 48226

ROBERT E BIRK MD
17894 MACK AVE
DETROIT MI 48224

F ROSS BIRKHILL MD
31 SHADY HOLLOW DR
DEARBORN MI 48124

ROBERT C BIRKS MD
VA HOSPITAL
ALLEN PARK MI 48101

C J BIRMINGHAM MD
WAYNE STATE UNIV
DETROIT MI 48207

LEONARD BIRNDORF MD
18317 JOHN R ST
DETROIT MI 48203

G W BISSELL MD
VA HOSPITAL
ALLEN PARK MI 48101

NORBERT M BITTRICH MD
16001 9 MILE RD
SOUTHFIELD MI 48075

EARL D BLACK MD
20340 HARPER
HARPER WOODS MI 48236

ROBERT W BLACK MD
408 DAV WHITNEY BLDG
DETROIT MI 48226

ALEXANDER BLAIN 111 MD
2201 E JEFFERSON
DETROIT MI 48207

JAMES H BLAIN JR MD
935 GRAND MARAIS
DETROIT MI 48230

MAX BLAINE MD
13700 WOODWARD
DETROIT MI 48203

WM F BLAIR MD
81 E KIRBY ST
DETROIT MI 48202

RUSSELL S BLANCHARD MD
3724 JACKSON ST
OMAHA NEBRASKA 68105

DOUGLAS H BLANKS MD
12811 NORTHLINE
SOUTHGATE MI 48192

RONALD W BLATT MD
32226 TALL TIMBER DR
FARMINGTON MI 48024

ALFRED BLEIER MD A
1583 CANYON EST DR
PALM SPRINGS CA 92262

DAVID H BLINKHORN MD
8445 JEFFERSON
DETROIT MI 48214

C L BLOCK MD MED DIR
FORD MOTOR CO
THE AMERICAN RD

DEARBORN MI 48121

MELVIN A BLOCK MD
2799 W GRAND BLVD
DETROIT MI 48202

JAMES B BLODGETT MD
3535 W 13 MILE RD #406
ROYAL OAK MI 48072

WM H BLODGETT MD
74 W ADAMS AVE
DETROIT MI 48226

MARSHALL J BLONDY MD
19201 W SEVEN MILE RD
DETROIT MI 48219

ALBERT BLOOM MD
6484 CHENE ST
DETROIT MI 48211

ARTHUR R BLOOM MD L
16500 N PARK DR #1406
SOUTHFIELD MI 48075

VICTOR BLOOM MD
951 E LAFAYETTE
DETROIT MI 48207

ROBT J BLOOR MD
HENRY FORD HOSP
DETROIT MI 48202

ROSEMARIE BLOSEN MD
2140 GORNO CT
TRENTON MI 48183

GILBERT B BLUHM MD
HENRY FORD HOSP
DETROIT MI 48202

GEORGE L BLUM MD
15901 W 9 MILE RD
SOUTHFIELD MI 48075

FRANK S BLUMENTHAL MD
261 BRADY
DETROIT MI 48201

FRANZ L BLUMENTHAL MD L
2686 HEATHERWAY
ANN ARBOR MI 48104

ABRAHAM BLUMER MD
22341 W EIGHT MILE RD
DETROIT MI 48219

JOHN L BOCCACCIO MD
332 EASTLAND CENTER
PROFESSIONAL BLDG

DETROIT MI 48225

JAMES J BOCCIA MD
15761 E WARREN
DETROIT MI 48224

ARTHUR W BODDIE MD
2737 CHENE ST
DETROIT MI 48207

CHESTER J BOGUCKI MD
MICH DEPT OF HLTH
155 N SAGINAW ST

PONTIAC MI 48058

ROBT E BOGUE MD
15901 W 9 MILE RD #604
SOUTHFIELD MI 48075

LADISLAUS BOGUSZ MD R
29215 MARANYA RD
HOMESTEAD FL 33030

OSHIN BOHJALIAN MD
CRITTENTON HOSPITAL
DETROIT MI 48206

Z STEPHEN BOHN MD
320 PROFESSIONAL BLDG
DETROIT MI 48201

A WAITE BOHNE MD
HENRY FORD HOSP
DETROIT MI 48202

JOHN R BOLAND MD R
BOX 50
GRAND MARAIS MI 49839

MURRAY BOLES MD
26381 DUNDALK LANE
FARMINGTON MI 48024

DONALD S BOLSTAD MD
HENRY FORD HOSP
DETROIT MI 48202

SIDNEY BOLTER M D
6760 WOODBANK
BIRMINGHAM MI 48010

NORMAN BOLTON MD
19321 GREENFIELD
DETROIT MI 48235

RUSSELL P BOLTON JR MD
18530 GRAND RIVER
DETROIT MI 48223

OTTO F W BONETA MD A
19697 CARRIE
DETROIT MI 48234

JAIME BONILLA MD
25447 PLYMOUTH RD
DETROIT MI 48239

ABRAHAM M BOOKSTEIN MD L
1725 PINECREST DR
FERNDALE MI 48220

GEO F BOONE MD
81 WOODLAND SHORES
GROSSE PTE SHORES MI 48236

EARNEST BOOTH MD
WOMANS HOSPITAL
DETROIT MI 48201

ROBERT G BORCHAK MD
17800 E EIGHT MILE
DETROIT MI 48236

IGOR I BORDEN MD
15361 PLYMOUTH RD
DETROIT MI 48227

MAURICE C BORIN MD A
29322 LANCASTER DR#203
SOUTHFIELD MI 48075

MELVIN BORNSTEIN MD
17600 NORTHLAND PK CT
SOUTHFIELD MI 48075

SIDNEY BORNSTEIN MD
28056 TAVESTOCK
SOUTHFIELD MI 48075

JOSE M BURREGO MD
1342 WHITTIER
GROSSE PTE MI 48236

EDMUND T BOTT MD
1629 FORD
WYANDOTTE MI 48192

ISADORE BOTVINICK MD
13701 W 7 MILE RD
DETROIT MI 48235

RODRICK E BOUCHER MD A
WAYNE STATE UNIV
DETROIT MI 48207

THOS A BOUTROUS MD
15801 W MC NICHOLS
DETROIT MI 48235

DONALD W BOWER MD
3725 FORT
LINCOLN PARK MI 48146

LEO J BOWERS MD
11200 E MCNICHOLS RD
DETROIT MI 48234

JAMES P BOWLBY MD
36000 FIVE MILE RD
LIVONIA MI 48154

ALBERT BOYAJIAN MD
17916 FARMINGTON
LIVONIA MI 48154

CHARLES R BOYCE MD
3700 WOODWARD AVE
DETROIT MI 48201

ALBERT L BOYD MD
4407 ROEMER
DEARBORN MI 48126

CAROLE P BOYD MD
1400 CHRYSLER EXPWY
DETROIT MI 48207

JOHN H BOYD MD L
2615 W JEFFERSON
TRENTON MI 48183

EUGENE H BOYLE MD
572 THORN TREE RD
GROSSE PTE WOODS MI 48236

RUTH B BRACKETT MD
18136 MACK
DETROIT MI 48224

ROBT G BRADEN MD
2300 OAK ST
WYANDOTTE MI 48192

HORACE F BRADFIELD MD
3008 E GRAND BLVD
DETROIT MI 48202

R JOHN BRADFIELD MD
18134 MACK AVE
DETROIT MI 48224

GEORGE T BRADLEY MD
3800 WOODWARD AVE
DETROIT MI 48201

WM N BRALEY MD L
12897 WOODWARD
DETROIT MI 48203

BENJ BRAND MD
1201 DAVID WHITNEY BLG
DETROIT MI 48226

ADOLFO J BRANE MD
LAFAYETTE CLINIC
DETROIT MI 48207

LIONEL BRAUN MD L
18520 W 7 MILE RD
DETROIT MI 48219

ROBERT A BRAUN MD
18610 HARTWELL AVE
DETROIT MI 48235

FRANK N BREDAU JR MD
24781 FIVE MILE RD
DETROIT MI 48239

SANDER J BREINER MD
7410 FRANKLIN RD
BIRMINGHAM MI 48010

VIOLA G BREKKE MD
369 GLENDALE ST
HIGHLAND PARK MI 48203

JOHN P BREMER MD
17700 MACK
DETROIT MI 48224

WM M BREMER MD
15641 E WARREN
DETROIT MI 48224

GERALD M BRENEMAN MD
28300 FOREST BROOK DR
FARMINGTON MI 48024

MICHAEL J BRENNAN MD
1168 THREE MILE DR
GROSSE PTE MI 48236

MORRIS S BRENT MD R
1330 STRATHCONA DR
DETROIT MI 48203

ROBERT L BRENT MD
954 FISHER BLDG
DETROIT MI 48202

BOYD K BRESNAHAN MD
17600 W 8 MILE RD
SOUTHFIELD MI 48075

NORMAN W BREY MD
1900 DAV BRODERICK TWR
DETROIT MI 48226

MURRAY BRICKMAN MD
24777 GREENFIELD
SOUTHFIELD MI 48075

WM J BRIGGS MD
1900 DAV BRODERICK TWR
DETROIT MI 48226

ELMER L BRINGARD MD
18110 FAIRFIELD
DETROIT MI 48227

G L BRINKMAN MD
263 LAKELAND
GROSSE PTE MI 48230

JACOB E BRISKI MD
1058 BLAIRMOOR
GROSSE PTE WOODS MI 48236

JOHN E BRISSON MD
17533 FORT ST
RIVERVIEW MI 48192

JOS C BRISSON MD R
23112 WESTBURY
ST CLAIR SHORES MI 48080

WM R BRISTOL MD
189 CLAVERLY
DETROIT MI 48236

SYLVAN A BROADMAN MD
25705 MIDDLEBELT
FARMINGTON MI 48024

DONALD R BROCK MD
36475 FIVE MILE RD
LIVONIA MI 48154

HARVEY S BRODERSON MD R

WILLIAM BROMME MD L
17170 E JEFFERSON AVE
GROSSE PTE MI 48230

ALDRICH M BROOKS JR MD
310 VISGER RD
RIVER ROUGE MI 48218

EUGENE M BROOKS MD
609 NORTHLAND MED BLDG
SOUTHFIELD MI 48075

NATHAN BROOKS MD
7401 3RD ST
DETROIT MI 48202

CHAS D BROSIUS MD
16981 FARMINGTON RD
LIVONIA MI 48154

WM L BROSIUS MD L
1823 FAIR OAK COURT
ROCHESTER MI 48063

ANDREW G BROWN MD
20905 GREENFIELD
SOUTHFIELD MI 48075

AUDREY D BROWN MD L
1795 CEDAR HILL DR
BIRMINGHAM MI 48010

CARLTON F BROWN MD
22335 LAGARONNE
SOUTHFIELD MI 48075

CHAS H BROWN MD
2387 FORT ST
WYANDOTTE MI 48192

ELI M BROWN MD
13123 LA SALLE
HUNTINGTON WOODS MI 48070

GORDON T BROWN MD L
13000 HAYES AVE
DETROIT MI 48205

JAMES C BROWN MD
5050 JOY ROAD
DETROIT MI 48204

JOHN R BROWN MD
1145 DAV WHITNEY BLDG
DETROIT MI 48226

KENNETH A BROWN MD
17316 LIVERNOIS
DETROIT MI 48221

OSCAR A BROWN MD
1633 DAV WHITNEY BLDG
DETROIT MI 48226

RICHARD O BROWN MD
3800 WOODWARD AVE #808
DETROIT MI 48201

ROBT A BROWN MD A
1524 VERNON
TRENTON MI 48183

SAUL BROWN MD
6890 WHITE PINE DR
BIRMINGHAM MI 48010

STANLEY H BROWN MD L
5656 LK WORTH RD E8
LAKE WORTH FL 33460

THOS A BROWN MD
5430 W WARREN AVE
DETROIT MI 48210

H H BROWNELL MD
8222 WOODCREST DR
GROSSE ILE MI 48138

PAUL G BROWNELL MD
18916 WOODWARD AVE
DETROIT MI 48203

ROBT C BRUDER MD
4520 FIRESTONE AVE
DEARBORN MI 48126

EDGAR S BRUER MD
12170 FORT ST
WYANDOTTE MI 48192

EDWIN L BRUER MD
12170 FORT ST
WYANDOTTE MI 48192

BROCK E BRUSH MD
2799 W GRAND BLVD
DETROIT MI 48202

MARTIN F BRUTON M D
341 MASSACHUSETTS
DETROIT MI 48203

DONALD I BRYAN MD
15901 W 9 MILE RD
SOUTHFIELD MI 48075

RAYMOND E BUCK MD
1575 E LAFAYETTE
DETROIT MI 48207

ROBIN C BUERKI MD
HENRY FORD HOSP
DETROIT MI 48202

JAN W BUETTGEN MD
16800 E WARREN
DETROIT MI 48224

ROBERT H BURGE MD
23843 JOY RD
DEARBORN MI 48127

RALPH M BURKE MD
580 UNIVERSITY PL
GROSSE PTE MI 48236

THOMAS K BURNHAM MD
HENRY FORD HOSP
DETROIT MI 48202

ROBERT E BURNS M D
HENRY FORD HOSP
DETROIT MI 48202

ROBT T BURNS MD
11110 MORANG RD
DETROIT MI 48224

HOWARD B BURNSIDE MD
33 OAKLAND PARK
PLEASANT RIDGE MI 48069

DAVID BURNSTINE MD
18400 SCHAEFER
DETROIT MI 48235

JULIUS Y BURNSTINE MD L
45 OWEN AVE
DETROIT MI 48202

PERRY P BURNSTINE MD L
2329 W GRAND BLVD
DETROIT MI 48208

ROSWELL G BURROUGHS MD
18161 W 12 MILE RD
LATHRUP VILLAGE MI 48075

HOWARD A BURROWS MD L
10423 W WARREN AVE
DEARBORN MI 48126

JOHN H BURROWS MD
22101 MOROSS RD
DETROIT MI 48236

HARRY S BURSTEIN MD
2950 W GRAND BLVD
DETROIT MI 48202

I MARVIN BURSTEIN M D
2950 W GRAND BLVD
DETROIT MI 48202

IRVING F BURTON MD
26912 YORK RD
HUNTINGTON WOODS MI 48070

GLENDON J BUSH MD
18901 W MC NICHOLS
DETROIT MI 48219

JAMES E BUTLER MD
2177 W GRAND BLVD
DETROIT MI 48208

JOHN D BUTLER MD
2173 W GRAND BLVD
DETROIT MI 48208

LAWRENCE H BUTLER MD L
14521 EAST 7 MILE RD
DETROIT MI 48205

RICHARD G BUTLER MD
1922 MONROE
DEARBORN MI 48124

VOLNEY N BUTLER MD L
28 W ADAMS AVE
DETROIT MI 48226

EDWARD J BUTTRUM MD
14755 FENKELL ST
DETROIT MI 48227

GLEN L BYERS MD A
DETROIT GENERAL HOSP
DETROIT MI 48226

HECTOR H CABRAL MD
24860 RIVER HEIGHTS
SOUTHFIELD MI 48075

ENRIQUE CABRERA MD
30900 FORD RD
GARDEN CITY MI 48135

RALPH E CADGER MD M
719 NEW CENTER BLDG
DETROIT MI 48202

JOS L CAHALAN MD
15830 FORT ST
SOUTHGATE MI 48192

BERNARD J CAHN MD A
MIL WOMACK ARMY HOSP
FT BRAGG N C 28307

WALDO L CAIN MD
3800 WOODWARD AVE #804
DETROIT MI 48201

GEO L CALDWELL MD L
12017 JOSEPH CAMPAU
DETROIT MI 48212

JOHN R CALDWELL MD
2799 W GRAND BLVD
DETROIT MI 48202

REGIS L CALLAGHAN MD
22146 FORD RD
DEARBORN MI 48128

YANI V CALMIDIS MD
24800 CROMWELL
FRANKLIN MI 48025

JOHN G CALWELL MD
714 NEW CENTER BLDG
DETROIT MI 48202

ARTHUR H CAMERON MD L
155 VINEWOOD
WYANDOTTE MI 48192

DUNCAN A CAMERON MD
2021 MONROE
DEARBORN MI 48124

HARVEY E CAMPBELL MD
3 ROBINDALE CT
DEARBORN MI 48124

L F CAMPBELL MD
1950 COOLIDGE
TROY MI 48084

MALCOLM D CAMPBELL MD L
1520 N GULLEY RD
DEARBORN MI 48128

MARY B CAMPBELL MD L
10454 KINGSTON
HUNTINGTON WOODS MI 48070

ROBT E CAMPBELL MD
20901 MOROSS RD
DETROIT MI 48236

RUTH B CAMPBELL MD
3800 WOODWARD AVE #314
DETROIT MI 48201

THELMA M CAMPBELL MD
2355 MONROE BLVD
DEARBORN MI 48124

ENRIQUE CAMPS MD
1838 RUSSELL
DEARBORN MI 48128

E CANCINO SAMSON MD
18700 MEYERS RD
DETROIT MI 48235

HERBERT C CANTOR MD
26831 N WOODWARD
HUNTINGTON WOODS MI 48070

MEYER O CANTOR MD
4850 CHARING CROSS
BLOOMFIELD HILLS MI 48013

LAWRENCE A CANTOW MD
19291 WARRINGTON DR
DETROIT MI 48221

MARY E CANTRELL MD
HENRY FORD HOSP
DETROIT MI 48202

ELMER E CAPELLARI MD
810 MUTUAL BLDG
28 W ADAMS AVE

DETROIT MI 48226

DAVID B CAPOBRES MD
3001 E 7 MILE RD
DETROIT MI 48234

JOS M CAPUTO MD
2021 MONROE BLVD
DEARBORN MI 48124

NANCY T CAPUTO MD
17712 MACK AVE
GROSSE PTE MI 48236

EUGENE T CAPUZZI MD
19061 LACROSSE
LATHRUP VILLAGE 48075

JAMES E CARAWAY MD R
R1 BOX 503
FRANKLIN NC 28734

LOUIS CARBONE MD
487 LAKELAND
GROSSE PTE MI 48230

TOMAS CARBONELL MD
353 DEVONSHIRE
DEARBORN MI 48124

JOHN D CAREY MD
HENRY FORD HOSP
DETROIT MI 48202

JOHN C CARLISLE MD
15101 SOUTHFIELD
ALLEN PARK MI 48101

HAROLD W CARLSON MD L
18070 WILDEMERE AVE
DETROIT MI 48221

KENNETH W CARMAN MD
30928 FORD RD
GARDEN CITY MI 48135

JOS CARP MD
8717 VAN DYKE
DETROIT MI 48213

C J CARPENTER MD L
P O BOX 390
WAYNE MI 48184

WM S CARPENTER MD
18255 W MCNICHOLS RD
DETROIT MI 48219

LEE CARRICK MD
18050 MACK AVE
GROSSE PTE MI 48236

ELMER H CARROLL MD L
16734 GREENVIEW
DETROIT MI 48219

JEROME G CARROLL MD
29588 FIVE MILE RD
LIVONIA MI 48154

LONA B CARROLL MD L
938 DAVID WHITNEY BLDG
DETROIT MI 48226

HERMAN J CARSON MD
19149 SEVEN MILE RD
DETROIT MI 48219

HENRY R CARSTENS MD L
6896 N CLUNBURY RD
BIRMINGHAM MI 48010

JAMES A U CARTER MD
19271 STRATHCONA DR
DETROIT MI 48203

LELAND F CARTER MD
114 HANDY RD
GROSSE PTE MI 48236

MIGUEL A CASAS MD
9613 E OUTER DR
DETROIT MI 48213

PHILIP N CASCADE MD
SINAI HOSPITAL
DETROIT MI 48235

HILDA B CASE MD
261 MACK BLVD
DETROIT MI 48201

MORTON B CASH MD
33155 ANNAPOLIS
WAYNE MI 48184

RALPH CASH MD
15705 W TEN MILE RD
SOUTHFIELD MI 48075

TOM J CASPERSON MD A
DETROIT GENERAL HOSP
DETROIT MI 48226

HARRY E CASSEL M D
6742 PARK AVE
ALLEN PARK MI 48101

MAURICE E CASTLE MD
20211 GREENFIELD
DETROIT MI 48235

JOSEPH V CATALANO MD
20905 GREENFIELD
SOUTHFIELD MI 48075

EDGAR H CAUGHEY MD
11301 WHITTIER ST
DETROIT MI 48224

FRED E CAUMARTIN MD
17184 WILDEMERE
DETROIT MI 48221

ANIBAL CAZAL MD
911 DAVID WHITNEY BLDG
DETROIT MI 48226

FRANK A CELLAR JR MD
26789 WOODWARD AVE
HUNTINGTON WOODS MI 48070

RICARDO S CENTENO MD A
GRACE HOSPITAL
DETROIT MI 48202

ALBERT J CERAVOLO MD
468 CADIEUX RD
DETROIT MI 48230

ANTHONY R CERESKO MD
7310 WOODWARD AVE #14
DETROIT MI 48202

EUGENE J CETNAR MD
4322 BISHOP
DETROIT MI 48224

NED I CHALAT MD
1553 WOODWARD AVE
DETROIT MI 48226

HENRY G CHALL MD L
2941 W MC NICHOLS RD
DETROIT MI 48221

NORA CHANG MD
CHILDRENS HOSPITAL
DETROIT MI 48202

SIDNEY E CHAPIN MD
125 N MILITARY
DEARBORN MI 48124

AARON L CHAPMAN M D L
406 W FRISCO RD
PENSACOLA FL 32507

PAUL T CHAPMAN MD
1151 TAYLOR AVE
DETROIT MI 48202

ROLAND H CHAPMAN MD
3790 WOODWARD AVE
DETROIT MI 48201

HENRY A CHAPNICK MD
19335 PRAIRIE
DETROIT MI 48221

BARBARA M CHAPPER MD
861 MONROE
DEARBORN MI 48124

SIDNEY CHARNAS MD
15901 W NINE MILE RD
SOUTHFIELD MI 48075

ARNOLD D CHARNLEY MD
1678 MERRIMAN RD
WAYNE MI 48184

CLYDE H CHASE MD R
2922 DAWES ST SE
GRAND RAPIDS MI 49508

JACOB L CHASON MD
1401 RIVARD ST
DETROIT MI 48207

WILLIAM M CHAVIS MD
13800 LIVERNOIS
DETROIT MI 48238

FRANK E CHECK MD
76 W ADAMS AVE
DETROIT MI 48226

ALLEN S Y CHEN MD
11933 BELLEVILLE RD
BELLEVILLE MI 48111

CALVIN H CHEN MD
STATE HOSP
NORTHVILLE MI 48167

SHEK C CHEN MD
1326 ST ANTOINE
DETROIT MI 48226

YOU CHEN CHEN MD
CHILDREN S HOSPITAL
DETROIT MI 48202

VINCENT V CHEN MD
1800 TUXEDO
DETROIT MI 48206

B J CHERENZIA MD
7437 WELLBOURNE CT
BIRMINGHAM MI 48010

ALICE CHESTER M D
25085 COOLIDGE HWY
OAK PARK MI 48237

WM P CHESTER MD
3800 WOODWARD RM 802
DETROIT MI 48201

GEO M CHILDS MD L
1059 FISHER BLDG
DETROIT MI 48202

WILLARD A CHIPMAN MD L
17526 FIELDING
DETROIT MI 48219

ADOLFO M CHIPOCO MD
950 E STATE FAIR RD
DETROIT MI 48203

BERNARD CHODORKOFF MD
19435 SHREWSBURY
DETROIT MI 48221

ABDUL S CHOUDHRY MD
17533 FORT ST
RIVERVIEW MI 48192

MARION C CHOWN MD
2025 FORD
WYANDOTTE MI 48192

R C CHRISTENSEN MD
20861 MACK AVE
GROSSE PTE WOODS MI 48236

JAMES G CHRISTOPHER MD A
20295 DOUGLAS CT
BIRMINGHAM MI 48010

LAURENCE A CHROUCH MD L
PLEASANT HILL TN 38578

ALOYSIUS S CHURCH MD
19570 BRETTON DR
DETROIT MI 48223

MARIO S CIOFFARI MD
21819 W 9 MILE RD
SOUTHFIELD MI 48075

MUIR CLAPPER MD
1401 RIVARD ST
DETROIT MI 48207

ARTHUR M CLARK MD
22371 NEWMAN
DEARBORN MI 48124

CHARLES E CLARK 111 MD A
WAYNE STATE UNIV
DETROIT MI 48207

MAX D CLARK MD
2799 W GRAND BLVD
DETROIT MI 48202

WM P CLARK MD
1808 BALDWIN
ANN ARBOR MI 48104

NORMAN E CLARKE MD L
21950 GREENFIELD
DETROIT MI 48237

NORMAN E CLARKE JR MD
21950 GREENFIELD
DETROIT MI 48237

ROBT B CLARKE MD
76 W ADAMS AVE
DETROIT MI 48226

RAYMOND R CLEMENS MD
23843 JOY
DEARBORN MI 48127

VOLNA CLERMONT MD
5050 JOY RD
DETROIT MI 48204

JOHN E CLIFFORD MD
18348 MACK
DETROIT MI 48236

ANDREW R W CLIMIE MD
HARPER HOSPITAL
DETROIT MI 48201

JOHN P CLUNE MD
414 DAVID WHITNEY BLDG
DETROIT MI 48226

E OSBORNE COATES JR MD
HENRY FORD HOSP
DETROIT MI 48202

JOHN H COBANE MD L
151 MERRIWEATHER
DETROIT MI 48236

EDGAR G COCHRANE MD L
503 MED ARTS BLDG
DETROIT MI 48203

S G COCORELIS MD A
C/O JACK GARRIS
MUNICIPAL COURT BLDG
110 W HURON
ANN ARBOR MI 48108

DAVID M COHEN MD A
US NAVAL HOSPITAL
BEAUFORD S C 29902

HERBERT H COHEN MD
17563 GREENFIELD
DETROIT MI 48235

S LEONARD COHN MD
28505 SOUTHFIELD RD
LATHRUP VILLAGE MI 48075

DON A COHOE MD L
18916 WOODWARD AVE
DETROIT MI 48203

WYMAN C C COLE MD L
1116 LEISURE LN #3
WALNUT CREEK CA 94529

WYMAN C C COLE JR MD
23843 JOY ROAD
DEARBORN HGTS MI 48127

WM G COLEMAN MD
20526 GRAND RIVER AVE
DETROIT MI 48219

THOMAS B COLES JR MD
GRACE HOSPITAL
DETROIT MI 48235

M RAYMOND COLLINGS MD L
9201 W OUTER DRIVE
DETROIT MI 48219

JAMES E COLLINS MD
13103 W CHICAGO BLVD
DETROIT MI 48228

JAMES W COLLINS MD
13800 LIVERNOIS
DETROIT MI 48238

LESLIE T COLVIN MD R
15015 GLASTONBURY RD
DETROIT MI 48223

RAYMOND G COLYER MD R
284 PILGRIM
BIRMINGHAM MI 48009

JULIUS V COMBS MD
2424 PURITAN
DETROIT MI 48238

LAWRENCE A COMSTOCK MD
3700 WEST RD
TRENTON MI 48183

EMMA J CONKLIN MD
WAYNE CO GEN HOSP
ELOISE MI 48132

LOWRY C M CONLEY MD L
99 TUXEDO AVE
DETROIT MI 48203

RICHARD C CONNELLY MD L
1360 THREE MILE DR
GROSSE PTE MI 48236

PAUL J CONNOLLY MD
3800 WOODWARD AVE
DETROIT MI 48201

PHYLLIS M CONNOR MD
6500 LODGE EXPWY
GOLD KEY INN
DETROIT MI 48202

JOHN J CONNORS MD
25657 SOUTHFIELD RD
SOUTHFIELD MI 48075

BASIL CONSIDINE JR MD
HARPER HOSPITAL
DETROIT MI 48201

GERALD F CONWAY MD
501 BEAUMONT MED BLDG
ROYAL OAK MI 48072

CARLA A COOK MD
HENRY FORD HOSP
DETROIT MI 48202

JAMES A COOK MD
1815 NORTHLINE
WYANDOTTE MI 48192

JAMES C COOK MD
3825 BRUSH ST
DETROIT MI 48201

FRANK COOKINHAM MD
999 S HIGHLAND
DEARBORN MI 48124

WARREN B COOKSEY MD L
3535 W 13 MILE RD
ROYAL OAK MI 48072

JAMES B COOPER MD
18150 MACK AVE
GROSSE PTE MI 48236

RALPH R COOPER MD
1515 DAV WHITNEY BLDG
DETROIT MI 48226

RICHARD F COOPER MD
18100 SHADBROOK DR
NORTHVILLE MI 48167

THOMAS M COOPER MD
8445 E JEFFERSON AVE
DETROIT MI 48214

CATHERINE CORBEILLE MD L
700 SEWARD
DETROIT MI 48202

DAVID P CORBETT MD
HARPER HOSPITAL
DETROIT MI 48201

GILBERT E CORRIGAN MD
400 E LAFAYETTE
DETROIT MI 48226

JOSEPH A CORTEZ MD
19350 W MC NICHOLS
DETROIT MI 48219

ERNESTO COSTANTINO MD
15370 LEVAN RD
LIVONIA MI 48154

STEPHEN D COSTELLO MD
9435 ISLAND DR
GROSSE ILE MI 48138

JOHN F COTANT MD
15901 W 9 MILE RD #420
SOUTHFIELD MI 48075

MARIO COTE MD
13700 WOODWARD #800
DETROIT MI 48203

MOISES G COTO MD
26314 HARRIET DR
DEARBORN HEIGHTS MI 48127

SCHUYLER O COTTON MD R
2332 CARSON
DETROIT MI 48209

CHAS J COURVILLE MD
703 NORTHLAND MED BLD
SOUTHFIELD MI 48075

CHARLES M COWAN MD
1400 CHRYSLER EXPWY
DETROIT MI 48207

LEON B COWEN MD L
10225 N BALBOA DR
SUN CITY AZ 85351

ROBT L COWEN MD L
91 E KIRBY
DETROIT MI 48202

FRANK COX JR M D
HENRY FORD HOSP
DETROIT MI 48202

JAMES E COYLE MD
17770 MACK AVE
GROSSE PTE MI 48224

ROY D CRAIG MD
3790 WOODWARD AVE
DETROIT MI 48201

ROY E CRAIG MD
74 FONTANA LANE
GROSSE PTE SHORES MI 48236

EUGENE H CRAWLEY MD
885 BLOOMCREST
BLOOMFIELD HILLS MI 48013

E E J CROCKETT MD
1327 NICOLET
DETROIT MI 48207

LEO J CROLL MD
12703 W 7 MILE RD
DETROIT MI 48235

MAURICE CROLL MD
12703 W SEVEN MILE RD
DETROIT MI 48235

CHAS L CROOK MD
60 COLORADO ST
HIGHLAND PARK MI 48203

HAROLD E CROSS MD
68 N DEEPLAND RD
GROSSE PTE MI 48236

ROBERT J CROSSEN MD
20867 MACK AVE
GROSSE PTE WOODS MI 48236

JAMES E CROUSHORE MD L
561 NE GOLDEN HARBOUR
BOCA RATON FL 33432

VICTOR M CRUZ MD
15901 W 9 MILE RD #303
SOUTHFIELD MI 48075

MARIA V CSERHALMI MD
1302 BEACONSFIELD
DETROIT MI 48230

ROBT B CUBBERLEY MD
1800 TUXEDO ST
DETROIT MI 48206

FRANK CULLIS MD
261 MACK BLVD
DETROIT MI 48201

ROBERT P CURHAN MD
18709 MEYERS RD
DETROIT MI 48235

FRANK E CURTIS MD L
273 KENWOOD CT
DETROIT MI 48236

WM P CURTISS MD
22631 MACK AVE
ST CLAIR SHORES MI 48080

PAUL L CUSICK MD
15901 W 9 MILE RD #400
SOUTHFIELD MI 48075

GERALD A CYROWSKI MD
15901 W 9 MILE RD
SOUTHFIELD MI 48075

F M DAIGNAULT MD
20905 GREENFIELD
SOUTHFIELD MI 48075

HAROLD J DAITCH MD
22341 W EIGHT MILE RD
DETROIT MI 48219

MARTIN H DAITCH MD
15244 MIDDLEBELT RD
LIVONIA MI 48154

ESTHER H DALE MD L
4811 JOHN R ST
DETROIT MI 48201

MARK DALE MD
3702 E 8 MILE RD
DETROIT MI 48234

G DAL SANTO MD
1401 RIVARD ST
DETROIT MI 48207

EUGENE T DALY MD
24781 FENKELL
DETROIT MI 48223

JAMES C DANFORTH JR MD
20175 MACK AVE
GROSSE PTE WOODS MI 48236

ROBT D DANFORTH MD
20175 MACK AVE
GROSSE PTE WOODS MI 48236

JOHN J DANIELSKI MD
35478 PARKDALE
LIVONIA MI 48150

DAVID A DANLEY MD
MT CARMEL MERCY HOSP
DETROIT MI 48235

BRUCE L DANTO MD
466 FISHER BLDG
DETROIT MI 48202

GEORGE W DANZ MD
1539 FORD
WYANDOTTE MI 48192

PATRICK H DAOUST MD
15520 GARFIELD
ALLEN PARK MI 48101

JOHN J DARIN MD A
DETROIT GENERAL HOSP
DETROIT MI 48226

CHAS E DARLING MD
673 FISHER BLDG
DETROIT MI 48202

HARRY O DAVIDSON MD L
2799 W GRAND BLVD
DETROIT MI 48202

WINDSOR S DAVIES MD
28 W ADAMS AVE
DETROIT MI 48226

HERBERT A DAVIS MD
9901 MELBOURNE
ALLEN PARK MI 48101

JEROME D DAVIS MD
19075 MIDDLEBELT RD
LIVONIA MI 48152

W A DAWSON MD R
188 LAKE SILVER DR NW
WINTER HAVEN FL 33880

A JACKSON DAY MD
3800 WOODWARD AVE #406
DETROIT MI 48201

FRANCIS T DAY MD
18540 MACK
DETROIT MI 48236

JAY C DAY MD
1016 PROF PLAZA
DETROIT MI 48201

JORGE H DAY MD N
1787 NEWCASTLE
GROSSE PTE WOODS MI 48236

RUTH S DAY MD
3790 WOODWARD AVE
DETROIT MI 48201

VEHBI DAYIOGLU MD
27560 CHERRY HILL
GARDEN CITY MI 48135

ELIODORO DE AENLLE MD
29022 MERRICK
WARREN MI 48092

GEORGE A DEAN MD
18900 W TEN MILE RD
SOUTHFIELD MI 48075

ROGER W DE BUSK MD
4160 JOHN R ST
DETROIT MI 48201

CHRISTOPHER DEEN MD
1800 TUXEDO
DETROIT MI 48206

ROBT J DEERING MD
1359 CHAMPAIGN
LINCOLN PARK MI 48146

ALBERT F DE GROAT MD L
10205 W OUTER DR
DETROIT MI 48202

DANIEL DEITCH MD
KIRWOOD GENERAL HOSP
DETROIT MI 48238

EDWIN DE JONGH MD
GEN MOTORS BUILDING
DETROIT MI 48202

STELLA M DELAINI MD
3011 W GRAND BLVD
DETROIT MI 48202

BETTY J DE LAWRENCE MD
21576 MICHIGAN AVE
DEARBORN MI 48124

THOMAS DE LAWRENCE MD
21576 MICHIGAN AVE
DEARBORN MI 48124

THOS E DEL GIORNO MD A

MECOSTA MI 49332

P A DELGIUDICE MD
GRACE HOSPITAL
DETROIT MI 48201

FRANCISCO DEL VALLE MD
3729 FORT ST
LINCOLN PARK MI 48146

MARIO DEL VALLE MD
5826 ANDOVER
TROY MI 48084

ALPHONSE R DERESZ MD
4204 E OUTER DR
DETROIT MI 48234

PAUL E DERLETH MD
563 W OAKRIDGE AVE
FERNDALE MI 48220

C F DERRICK MD
3677 FORT STREET
LINCOLN PARK MI 48146

GEO C DE SMYTER MD
15527 E WARREN
DETROIT MI 48224

YVON J DES ROBERTS MD
18430 MACK AVE
DETROIT MI 48236

OWEN J DEUBY MD
15121 W SEVEN MILE RD
DETROIT MI 48235

DOUGLAS A DEVENS MD
DETROIT GENERAL HOSP
DETROIT MI 48226

HERBERT W DEVINE MD
22101 MOROSS RD
DETROIT MI 48236

LILIAN M DIAKOW MD
1539 N LINE RD
WYANDOTTE MI 48192

GEORGE DIAZ MD A
LAFAYETTE CLINIC
DETROIT MI 48207

G J DIAZDELCASTILLO MD A
WAYNE STATE UNIV
DETROIT MI 48207

ROBERT C DICKENMAN MD
DETROIT MEMORIAL HOSP
DETROIT MI 48226

BASIL R DICKSON MD
337 W GRAND BLVD
DETROIT MI 48216

EFRAIN O DICKSON MD
4021 HARDSWOOD DR
ORCHARD LAKE MI 48033

ELIAS L DICKSON JR MD
17320 LIVERNOIS
DETROIT MI 48221

LEON A DICKSON MD
18200 WYOMING
DETROIT MI 48221

MARY D DICKSON MD
18424 MACK AVE
GROSSE PTE FARMS MI 48236

NELSON W DIEBEL MD
660 CADIEUX RD
DETROIT MI 48230

FRED C DIEKMAN MD
31815 SOUTHFIELD RD
BIRMINGHAM MI 48009

MARGARET R DIETZE MD
861 MONROE
DEARBORN MI 48124

LEONARD L DI LELLA MD
12811 NORTHLINE RD
SOUTHGATE MI 48192

HUGH L DILL MD L
365 MARY ST
GROSSE PTE FARMS MI 48236

J LEWIS DILL MD L
1070 S W TAMARIND WAY
BOCA RATON FL 33432

PANFILO C DI LORETO MD
285 VINCENNES PL
DETROIT MI 48236

GENNARO J DI MASO M D
20963 KELLY
EAST DETROIT MI 48021

GEO E DIMOND MD
18401 BRETTON DR
DETROIT MI 48223

RANIERO DIPIERO MD
1800 TUXEDO
DETROIT MI 48206

EDWIN F DITTMER MD
18342 MACK AVENUE
DETROIT MI 48236

FREDK W DIXON MD
245 S MARTHA
DEARBORN MI 48124

RAY S DIXON MD L
525 EDWARDS ST
GRAND LEDGE MI 48837

ANGEL G DIZON MD
18424 W MCNICHOLS RD
DETROIT MI 48219

S DJURASKOVIC MD A
WAYNE STATE UNIV
DETROIT MI 48207

CLIFFORD L DOANE MD
15041 E 7 MILE RD
DETROIT MI 48205

JOHN C DODDS MD L
18520 W 7 MILE RD
DETROIT MI 48219

CHAS F DODENHOFF MD
18031 KELLY RD
DETROIT MI 48224

FOREST D DODRILL MD
WOODBERRY DR
BLOOMFIELD HILLS MI 48013

WENDELL R DOERING MD
18211 W 12 MILE RD
LATHRUP VILLAGE MI 48075

EDWARD A DOLAN M D
1960 HAMMOND LAKE DR
PONTIAC MI 48053

STANLEY F DOLEGA MD
15640 E WARREN AVE
DETROIT MI 48224

SIDNEY DOLGOFF MD
15600 MICHIGAN AVE
DEARBORN MI 48126

SIMON DOLIN MD
28500 BELL RD
SOUTHFIELD MI 48075

HENRY M DOMZALSKI MD
15252 GRATIOT AVE
DETROIT MI 48205

ROLF W DONATH MD
719 NEW CENTER BLDG
DETROIT MI 48202

PATRICK T DONLON MD
UNIV OF CALIFORNIA
DAVIS CALIF 95616

EUGENE T DONOVAN MD
13349 MICHIGAN AVE
DEARBORN MI 48126

RICHARD S DONOVAN MD
18211 W 12 MILE RD
LATHRUP VILLAGE MI 48075

ALFREDO J DO PICO MD
6221 MERRIMAN RD
GARDEN CITY MI 48135

JOHN H DORAN MD
15101 PLYMOUTH RD
DETROIT MI 48227

JACK DORMAN MD
21701 W 11 MILE RD
SOUTHFIELD MI 48075

M G DOROSTKAR MD
45101 HARMONY
BELLEVILLE MI 48111

EDWARD C DORSEY MD
9000 E JEFFERSON
SUITE 11-11

DETROIT MI 48214

JOHN M DORSEY MD L
65 MOSS AVENUE
HIGHLAND PARK MI 48203

BHOGILAL C DOSHI MD
10448 LINCOLN
TAYLOR MI 48180

WILLIAM L DOSS MD
10145 E JEFFERSON
DETROIT MI 48214

CHESTER A DOTY MD L
1726 E MARYLAND AVE
PHOENIX ARIZ 85016

HOWARD P DOUB MD L
2799 W GRAND BLVD
DETROIT MI 48202

EDW A DOUGHERTY JR MD
18241 W MC NICHOLS RD
DETROIT MI 48219

CLAIR L DOUGLAS MD L
1201 RICHMOND ST #807
LONDON ONT CANADA

ROBT C DOUGLASS MD
23023 ORCHARD LAKE RD
FARMINGTON MI 48024

BENJ W DOVITZ MD
16820 GREENFIELD AVE
DETROIT MI 48235

IRA G DOWNER MD L
8445 E JEFFERSON AVE
DETROIT MI 48214

GEO O DOWNES MD
15062 HOUSTON
DETROIT MI 48205

ELLET H DRAKE MD
HENRY FORD HOSP
DETROIT MI 48202

RUTH L DRAPIZA MD
22231 W OUTER DR
DEARBORN MI 48124

EDWARD F DRAVES MD A
19647 JOY RD
DETROIT MI 48228

JOEL DREYER MD
15800 W MCNICHOLS RD
DETROIT MI 48235

MICHEL DROUIN MD A
24 BERNIER
QUEBEC 5 CANADA

Z J F DROZDOWSKA MD
240 CHESTERFIELD RD
BLOOMFIELD HILLS MI 48013

BRUCE H DRUKKER MD
HENRY FORD HOSPITAL
DETROIT MI 48202

JOHN K DRUMM MD
1420 ST ANTOINE ST
DETROIT MI 48226

DOROTHY D SENA MD
33000 PALMER RD
WAYNE MI 48184

JOS J DUBIN MD
23929 READING RD
SOUTHFIELD MI 48075

MARTIN S DUBPERNELL MD L
4019 GILBERT ST
DETROIT MI 48210

ROBT O DUBPERNELL MD
18595 GRAND RIVER
DETROIT MI 48223

JOHN J DUDEK MD
19244 GRAND RIVER
DETROIT MI 48223

JOHN J DUDEK JR MD
19244 GRAND RIVER
DETROIT MI 48223

PAUL R DUMKE MD
2799 W GRAND BLVD
DETROIT MI 48202

JAMES R DUNCAN MD
5050 JOY RD
DETROIT MI 48204

HENRY A DUNLAP MD
7815 JEFFERSON AVE E
DETROIT MI 48214

CORNELIUS E DUNN MD L
327 VILLA LANE
ST CLAIR SHORES MI 48080

JOHN S DUNN MD A
4063 18TH ST N W
ROCHESTER MINN 55901

GERALD E DUPLER MD
24234 MICHIGAN AVE
DEARBORN MI 48124

EVERETT W DURHAM MD
18101 OAKWOOD BLVD
DEARBORN MI 48124

ROBT DURHAM MD L
HENRY FORD HOSP
DETROIT MI 48202

DWIGHT J DUTCHER MD
711 S OXFORD
DETROIT MI 48236

FRANK A DUWE MD
25321 FIVE MILE RD
DETROIT MI 48239

PAUL J DWAIHY MD A
14530 E WARREN
DETROIT MI 48215

FRANCIS W DWYER MD A
15901 W 9 MILE RD #314
SOUTHFIELD MI 48075

F LORNE DYER MD
115 E DUNLAP
NORTHVILLE MI 48167

ROSEMARY M DYKEMA MD
18424 MACK AVE
DETROIT MI 48236

JOHN F DZIUBA MD
18901 W WARREN AVE
DETROIT MI 48228

PAUL DZUL MD
17800 E 8 MILE RD
DETROIT MI 48236

CHAS C EADES MD R
NO 60 TREASURE ISLAND
LAGUNA BEACH CA 92651

ROBT L EASTERLY MD
1404 FORD AVENUE
WYANDOTTE MI 48192

RAYMOND J ECHT MD
VA HOSPITAL
ALLEN PARK MI 48101

ARTHUR W ECKHOUS MD
1015 KALES BLDG
DETROIT MI 48226

DONALD E ECONOMY MD
18 W LANE CT
DEARBORN MI 48124

SAML J EDER MD L
19800 W 12 MILE RD
SOUTHFIELD MI 48075

IRVING I EDGAR MD
1036 DAV WHITNEY BLDG
DETROIT MI 48226

WM N EDMONDS MD L
18525 MERRIMAN RD
LIVONIA MI 48152

ROBT B EDMONDSON MD
18501 MACK AVE
DETROIT MI 48236

C RUPERT L EDWARDS MD
3800 WOODWARD AVE #318
DETROIT MI 48201

JAMES G EDWARDS MD
17751 E WARREN AVE
DETROIT MI 48224

CHARLES F EGAN MD
WYANDOTTE GEN HOSP
WYANDOTTE MI 48192

A B EISENBREY MD
1026 FISHER BLDG
DETROIT MI 48202

B EISENSTEIN MD
459 FISHER BLDG
DETROIT MI 48202

EDWARD F ELDREDGE MD
18540 MACK AVE
GROSSE PTE MI 48236

JEAN C ELIE MD
938 DAV WHITNEY BLDG
DETROIT MI 48226

JOS P ELLIOTT JR MD
HENRY FORD HOSP
DETROIT MI 48202

FRANK R ELLIS MD
800 S LAFAYETTE
DEARBORN MI 48124

LEONARD E ELLISON MD
3800 WOODWARD AVE
DETROIT MI 48201

MEYER J ELMAN MD
108 W HANCOCK
DETROIT MI 48201

ABRAHAM L ELSON MD
28200 SOUTHFIELD
LATHRUP VILLAGE MI 48075

ROBT J ELVIDGE MD L
2900 W GRAND BLVD
DETROIT MI 48202

JOHN EMANUELSEN MD
14930 GRANDVILLE
DETROIT MI 48223

HERMAN C EMMERT MD L
4927 N 34TH
ARLINGTON VA 22207

GERHARD C ENDLER MD
1413 BLAIRMOOR CT
GROSSE PTE WOODS MI 48236

HENRI L ENFROY MD
7421 W 7 MILE RD
DETROIT MI 48221

EARL H ENGEL MD L
33 EMMONS COURT
WYANDOTTE MI 48192

FREDK W ENGSTROM MD
2021 MONROE
DEARBORN MI 48124

RUBY M ENGSTROM MD
1777 CULVER AVE
DEARBORN MI 48124

LAUREL S ENO MD
212 EASTLAND PR BLDG
DETROIT MI 48236

DWIGHT C ENSIGN MD L
HENRY FORD HOSP
DETROIT MI 48202

WILLIAM R EPPLER MD
20160 MACK AVE
DETROIT MI 48236

BURTON S EPSTEIN MD
18215 GREENFIELD
DETROIT MI 48235

ELDON W ERICKSON MD
25750 W OUTER DR
LINCOLN PARK MI 48146

MILES A ERICKSON MD
1932 FORD AVE
WYANDOTTE MI 48192

JOS M ERMAN MD L
19530 STRATFORD RD
DETROIT MI 48221

SAIT D ERMETE MD
32633 CHERRY HILL
WESTLAND MI 48185

REGINALD H ERNST MD
5050 JOY RD
DETROIT MI 48204

JOS W ESCHBACH MD L
935 S MILITARY ST
DEARBORN MI 48124

FREYDOON ESKANDARI MD M
3800 WOODWARD AVE
DETROIT MI 48202

FRANK J EURS MD
20485 MACK AVE
GROSSE PTE WOODS MI 48236

GEORGE C EVANS MD
4059 W DAVISON
DETROIT MI 48238

GOMER P EVANS JR MD
1553 WOODWARD AVE
DETROIT MI 48226

JOS M EVANS MD
16431 HARPER
DETROIT MI 48224

TOMMY N EVANS MD
18630 FAIRWAY DR
DETROIT MI 48221

CHAS H EWING MD L
17120 E WARREN
DETROIT MI 48224

WM R EYLER MD
2799 W GRAND BLVD
DETROIT MI 48202

ALFRED E EYRES MD
17800 E 8 MILE
DETROIT MI 48236

HAROLD L FACHNIE MD
17401 GREENFIELD RD
DETROIT MI 48235

SEBASTIAN J FAELLO MD
16840 E WARREN AVE
DETROIT MI 48224

IRVING D FAGIN MD
18254 LIVERNOIS AVE
DETROIT MI 48221

RAMFIS B FAHIM MD
14634 E 7 MILE RD
DETROIT MI 48205

A C FAJARDO MD
OAKWOOD HOSP
DEARBORN MI 48124

MORDECAI L FALICK MD
189 TOWNSEND
BIRMINGHAM MI 48011

IRA E FALK MD
23300 PROVIDENCE DR
SOUTHFIELD MI 48075

LAWRENCE S FALLIS MD L
2799 W GRAND BLVD
DETROIT MI 48202

THEODORE S FANDRICH MD R
200 MIRAMAR AVE
MONTECITO CA 93103

LUIS R FANEGO MD
4496 LARME
ALLEN PARK MI 48101

AARON A FARBMAN MD
14515 KERCHEVAL
DETROIT MI 48215

ANGEL M FARINA MD
23550 JOY RD
DETROIT MI 48239

LARRY M FARNAM JR M D
6200 CADIEUX
DETROIT MI 48224

SHERMAN P FAUNCE MD
1824 SEMINOLE ST
DETROIT MI 48214

JOHN F FEA MD
MT CARMEL MERCY HOSP
DETROIT MI 48235

MAUREEN S FEDESON MD
MT CARMEL MERCY HOSP
DETROIT MI 48235

THEODORE M FEDESON MD
MT CARMEL MERCY HOSP
DETROIT MI 48235

DAVID FELD MD
15101 W MC NICHOLS RD
DETROIT MI 48235

LEE E FELDKAMP MD
360 N MAIN
PLYMOUTH MI 48170

IRWIN FELDMAN MD
37380 GLENWOOD
WAYNE MI 48184

NATHANIAL L FELDMAN MD A
964 CERES RD
PALM SPRINGS CA 92262

PAUL H FELDMAN MD
16800 GREENFIELD
DETROIT MI 48235

MARTIN Z FELDSTEIN MD L
16500 NO PARK DR #420
SOUTHFIELD MI 48075

WM A FELLNER MD
3 202 GEN MOTORS BLDG
DETROIT MI 48202

WILLIAM R FELLOWS MD
3815 PELHAM
DEARBORN MI 48124

HAROLD B FENECH MD L
3800 WOODWARD AVE
DETROIT MI 48201

WM G FENNER MD
12454 E OUTER DR
DETROIT MI 48224

JOHN F FENNESSEY MD
512 RIVARD
GROSSE PTE MI 48236

MERYL M FENTON MD
15901 W 9 MILE RD
SOUTHFIELD MI 48075

RUSSELL F FENTON MD L
18469 HILLCREST BLVD
BIRMINGHAM MI 48009

STUART V FENTON MD
23300 GREENFIELD
OAK PARK MI 48237

VANCE FENTRESS MD
308 PROFESSIONAL PLAZA
DETROIT MI 48201

PHILIP J FERINGA MD
20840 VERNIER
HARPER WOODS MI 48236

CDR O U FERNANDO MC A
1ST MED BATTALION FPO
FIRST MARINE DIV
SAN FRANCISCO CA 96602

RICHARD J FERRARA MD
20045 MACK AVE
GROSSE PTE WOODS MI 48236

VIRGINIA M FERRARA MD
18422 WOODWARD
DETROIT MI 48203

FELICIANO FERRER MD
27634 FIVE MILE
LIVONIA MI 48154

GEORGE N FERRIS M D
20001 GREENFIELD
DETROIT MI 48235

MARION S FERSZT MD
15369 GRANDVILLE
DETROIT MI 48223

LEO S FIGIEL MD
1500 BALMORAL RD
DETROIT MI 48203

STEVEN J FIGIEL MD
4160 JOHN R ST
DETROIT MI 48201

LAWRENCE E FILKIN MD
621 FAIRBROOK
NORTHVILLE MI 48167

LEON FILL MD
2310 CASS EXEC SUITE
DETROIT MI 48201

F SINCLAIR FINCH MD
894 N RENAUD
DETROIT MI 48236

JEROME H FINCK MD
25841 PLYMOUTH
DETROIT MI 48239

EDWARD FINE MD
15901 W 9 MILE RD
SOUTHFIELD MI 48075

GERALD FINE MD
HENRY FORD HOSP
DETROIT MI 48202

SAML FINK MD
10161 BURTON
OAK PARK MI 48237

I S FINKELSTEIN MD
17508 DORSET
SOUTHFIELD MI 48075

M B FINKELSTEIN MD
18254 LIVERNOIS
DETROIT MI 48221

HILDO H FIORI MD
770 FISHER BLDG
DETROIT MI 48202

PAUL G FIRNSCHILD M D
8 SHADY HOLLOW
DEARBORN MI 48124

ARTHUR J FISCHER MD
15370 LEVAN RD
LIVONIA MI 48154

FREDK J FISCHER MD L
654 FISHER BLDG
DETROIT MI 48202

HERBERT L FISHBEIN MD
987 E JEFFERSON AVE
DETROIT MI 48207

GEO S FISHER MD
1709 DAV WHITNEY BLDG
DETROIT MI 48226

JAMES M FISHER MD
176 MERRIWEATHER
GROSSE PTE MI 48236

C H FITZGERALD MD DIR
234 STATE ST
WAYNE CO MENTAL
HEALTH CLINIC
DETROIT MI 48226

JAMES M FITZGERALD MD
15801 W MCNICHOLS
DETROIT MI 48235

F W FITZPATRICK MD
17187 SCHAEFER
DETROIT MI 48235

NORMAN W FLAHERTY MD
24315 FAIRMONT DR
DEARBORN MI 48124

THOMAS M FLAKE MD
13800 LIVERNOIS AVE
DETROIT MI 48238

L E FLEISCHMANN MD
CHILDRENS HOSPITAL
DETROIT MI 48202

WM R FLORA MD
17800 E EIGHT MILE RD
DETROIT MI 48236

BETTY S FLORES MD
1449 DAV WHITNEY BLDG
DETROIT MI 48226

WILLIAM S FLOYD MD
28505 SOUTHFIELD RD
LATHRUP VILLAGE MI 48075

MARIE N FLY MD
OAKWOOD HOSPITAL
DEARBORN MI 48124

ROBT G FOGT MD
316 NEFF ROAD
GROSSE POINTE MI 48230

HUGH S FOLEY MD L
22707 ALEXANDRINE
DEARBORN MI 48124

JOHN A FOOTE MD
1336 SOUTHFIELD RD
LINCOLN PARK MI 48146

GEO A FORD MD L
28 W ADAMS AVE
DETROIT MI 48226

FRANK S FORDELL MD R
22159 W OUTER DR
DEARBORN MI 48124

EDWARD G FORGRAVE MD
18520 GRAND RIVER
DETROIT MI 48219

GORDON R FORRER MD
905 PENNIMAN
PLYMOUTH MI 48170

ROBERT P FOSNAUGH M D
23185 TIMBERLINE
SOUTHFIELD MI 48075

E BRUCE FOSTER MD
20905 GREENFIELD RD
SOUTHFIELD MI 48075

OWEN C FOSTER MD L
1553 WOODWARD AVE
DETROIT MI 48226

WALLACE M FOSTER MD
13700 WOODWARD AVE
HIGHLAND PARK MI 48203

CHARLES W FOUNTAIN MD
2012 MONROE BLVD
DEARBORN MI 48124

MELVIN E FOWLER MD
247 E WARREN ST
DETROIT MI 48201

THOMAS A FOX JR MD
HENRY FORD HOSP
DETROIT MI 48202

PAUL L FRAIBERG MD
16240 N PARK DR
SOUTHFIELD MI 48075

BOY FRAME MD
543 LAKEPOINTE
GROSSE PTE PARK MI 48230

CHAS J FRANCE MD
17800 E EIGHT MILE RD
ESTLND PROF BLDG #436
HARPER WOODS MI 48225

MARION J FRANJAC MD R
3 AUBURN DRIVE
LAKE WORTH FL 33460

MAURICE A FRANKEL MD
17000 W EIGHT MILE
SOUTHFIELD MI 48075

JOHN E FRANKLIN MD
4075 INK RD
INKSTER MI 48141

NILS A FRANZEN MD
15360 OAKFIELD AVE
DETROIT MI 48227

GEO C FREDERICKSON MD
7430 SECOND
DETROIT MI 48202

HARRY W FREE MD
17550 W 12 MILE RD
SOUTHFIELD MI 48075

JOHN FREEDMAN MD R
BOX 952
PALM SPRINGS CA 92262

DONALD K FREEMAN MD
881 CHALMERS ST
DETROIT MI 48215

MABLE FREEMAN MD L
922 KINGS HWY
LINCOLN PARK MI 48146

MICHAEL W FREEMAN MD L
1810 WELLESLEY DR
DETROIT MI 48203

RICHARD F FREEMAN MD
310 VISGER
RIVER ROUGE MI 48218

WILMER FREEMAN MD
940 EAST 7 MILE RD
DETROIT MI 48203

SAMUEL FREID MD
17537 PARKSIDE
DETROIT MI 48221

ANDREW A FREIER MD
18597 W TEN MILE
SOUTHFIELD MI 48075

MORTON L FREIER MD
26440 SOUTHFIELD RD
LATHRUP VILLAGE MI 48037

EUGENE L FREITAS MD
ST JOHNS HOSPITAL
DETROIT MI 48236

J COURTNEY FREMONT MD A
55 HALL PLACE
GROSSE PTE FARMS MI 48236

ALEX S FRIEDLAENDER MD
15901 W NINE MILE RD
SOUTHFIELD MI 48075

SIDNEY FRIEDLAENDER MD
15901 W NINE MILE RD
SOUTHFIELD MI 48075

JOSEPH FRIEDLANDER MD A

DAVID FRIEDMAN MD
1333 STRATHCONA
DETROIT MI 48203

HYMAN FRIEDMAN MD
6742 PARK AVE
ALLEN PARK MI 48101

ISIDOR H FRIEDMAN MD L
10 PETERBORO
DETROIT MI 48201

SEYMOUR FRIEDMAN MD
7636 ALLEN RD
ALLEN PARK MI 48101

HAROLD M FROST MD
HENRY FORD HOSP
DETROIT MI 48202

RICHARD G FROST MD
410 HILLCREST AVE
GROSSE PTE FARMS MI 48236

JAMES D FRYFOGLE MD
15901 W 9 MILE RD #715
SOUTHFIELD MI 48075

WILLIAM R FULGENZI MD
1210 KALES BLDG
DETROIT MI 48226

HUGH M FULLER MD
404 DAVID WHITNEY BLDG
DETROIT MI 48226

WM J FULTON MD R
BENNETT PTE RD
QUEENSTOWN MD 21658

CARL A GAGLIARDI MD
3516 FORT ST
LINCOLN PARK MI 48146

RAY D GAINES MD
WAYNE CO GEN HOSP
ELOISE MI 48132

JOHN E GAJEWSKI MD
MEDICAL DEPT
MEAD JOHNSON
2404 W PENNSYLVANIA
EVANSVILLE IND 47712

ROBERT J GALACZ MD
19291 WOODSTON RD
DETROIT MI 48203

H C GALANTOWICZ MD L
7433 MICH AVE
DETROIT MI 48210

THOS H GALANTOWICZ MD
23601 FORD RD
DEARBORN MI 48128

LASLO GALDONYI M D L
2311 DAV BRODERICK TWR
DETROIT MI 48226

CARREL B GALERNEAU MD L
964 OAKWOOD DR APT 152
ROCHESTER MI 48063

HENRY GALL M D
10531 FARMINGTON RD
LIVONIA MI 48150

EDW W GALLAGHER MD A
6851 ALVARADO RD #17
SAN DIEGO CA 92120

JAMES P GALLAGHER MD
14801 SOUTHFIELD
ALLEN PARK MI 48101

VINCENT J GALLANT MD
1414 WELLESLEY DR
DETROIT MI 48203

RICHARD P GALLUCCI MD
23100 CHERRY HILL
DEARBORN MI 48124

JOHN P GALVIN MD
19959 VERNIER RD
HARPER WOODS MI 48236

THOS GANOS MD
6742 PARK AVE
ALLEN PARK MI 48101

ROBERT I GANS MD
26615 GREENFIELD
SOUTHFIELD MI 48075

JOHN H GANSCHOW MD
1840 HOLBROOK AVE
DETROIT MI 48212

REMIGIO GARCIA MD
HENRY FORD HOSP
DETROIT MI 48202

LAWRENCE W GARDNER MD
6071 W OUTER DR
DETROIT MI 48235

MAX L GARDNER MD
19557 MACK AVE
GROSSE PTE MI 48236

GURDEV S GAREWAL MD
DETROIT MEMORIAL HOSP
DETROIT MI 48226

LOUIS B GARIEPY MD
14500 WOODMONT
DETROIT MI 48227

LOUIS J GARIEPY MD L
16401 GRAND RIVER AVE
DETROIT MI 48227

H HARVEY GASS MD
529 FISHER BLDG
DETROIT MI 48202

HERBERT B GASTON MD
7501 W MORROW CIRCLE
DEARBORN MI 48126

MIGUEL G GATMAITAN MD A
GRACE HOSPITAL
DETROIT MI 48201

ALEX GAYNOR MD
1755 E 7 MILE RD
DETROIT MI 48203

HAROLD W GEHRING MD
3535 W 13 MILE NO 507
ROYAL OAK MI 48072

AUGUST E GEHRKE MD R
850 TRAILWOOD PATH
BIRMINGHAM MI 48010

WM A GEITZ MD R
BOX 1133
BOCA RATON FL 33432

PHILIP D GELBACH MD
22600 KING RICHARD CT
BIRMINGHAM MI 48010

M J GEOGHEGAN MD
3815 PELHAM
DEARBORN MI 48124

JOHN A GERALT MD
11420 MACK AVE
DETROIT MI 48214

ROBT A GERISCH MD
1217 DAV WHITNEY BLDG
DETROIT MI 48226

ELMOND J GERONDALE MD L
3001 W GRAND BLVD
DETROIT MI 48202

HASSAN GHANDCHI MD
16975 FARMINGTON
LIVONIA MI 48154

DUNBAR P GIBSON MD
BOX 1256
DETROIT MI 48231

PETER GIBSON MD M
4455 W 14 MILE RD
ROYAL OAK MI 48072

WM GIBSON MD
3790 WOODWARD AVE
DETROIT MI 48202

FRED W GIESE M D
18526 SCHOOLCRAFT
DETROIT MI 48223

CONRAD L GILES MD
407 NORTHLAND MED BLDG
SOUTHFIELD MI 48075

STEPHEN M GILLESPIE MD
23100 CHERRY HILL
DEARBORN MI 48124

JAMES C GILLIAM JR MD
3502 BRUSH ST
DETROIT MI 48202

WATSON A GILPIN MD
1539 LOCKRIDGE
BLOOMFIELD HILLS MI 48013

JAMES L GILREATH MD
1800 TUXEDO
DETROIT MI 48206

JOHN GILROY MD
HARPER HOSPITAL
DETROIT MI 48201

HAROLD I GINSBERG MD
18181 W 12 MILE RD
LATHRUP VILLAGE MI 48075

BIRUTE GIRNIUS MD
15439 HARPER
DETROIT MI 48224

CHAS GITLIN MD L

PERRY C GITTINS MD L
2075 W LINCOLN RD
BIRMINGHAM MI 48009

DONOVAN H GIVENS JR MD
3800 WOODWARD
DETROIT MI 48201

WALDEMAR E GIZYNSKI MD
15420 FARMINGTON
LIVONIA MI 48154

GORDON K GLASGOW MD R
395 MOROSS RD
GROSSE PTE FARMS MI 48236

WALTER S GLAZER MD A
1490 CHARRINGTON RD
BIRMINGHAM MI 48010

RAYMOND B GLEMENT MD L
16126 WOODRING CT
LIVONIA MI 48154

BEN F GLOWACKI MD L
20905 GREENFIELD
SOUTHFIELD MI 48075

EDWARD T GLOWACKI MD
54 WEBBER PLACE
GROSSE PTE SHORES MI 48236

RAYMOND M GLOWACKI MD
2421 MUNROE
DEARBORN MI 48124

ALEGRO J GODLEY MD
3790 WOODWARD
DETROIT MI 48201

ELMER A GOERKE MD
36663 GODDARD RD
ROMULUS MI 48174

ANGUS G GOETZ MD L
3800 WOODWARD AVE #406
DETROIT MI 48201

MEHMET K GOKNAR MD
NORTHVILLE STATE HOSP
NORTHVILLE MI 48167

ARTHUR GOLDBERG MD
20461 JOHN R ST
DETROIT MI 48203

ALFRED GOLDEN MD
26764 YORK RD
HUNTINGTON WOODS MI 48070

ALFRED GOLDFADEN MD
9122 W FORT ST
DETROIT MI 48209

AUBREY GOLDMAN MD
18400 SCHAEFER
DETROIT MI 48235

PERRY GOLDMAN MD
18050 FAIRWAY DR
DETROIT MI 48221

ROBERT T GOLDMAN MD
WAYNE COUNTY HOSPITAL
ELOISE MI 48132

MILTON H GOLDRATH MD
17000 W 8 MILE RD
SOUTHFIELD MI 48075

ABE S GOLDSTEIN MD
19445 GLOUCESTER DR
DETROIT MI 48203

JEAN S GOLDSTEIN MD
19105 W SEVEN MILE RD
DETROIT MI 48219

MAURICE D GOLLMAN MD
17000 W EIGHT MILE RD
SOUTHFIELD MI 48075

JORGE GOMEZ MD A
US NAVAL HOSPITAL
BEAUFORT S C 29902

ROMUALD H GOMLEY M D
7220 GRATIOT AVE
DETROIT MI 48213

SALVADOR GONZALEZ MD
28 W ADAMS ST
DETROIT MI 48226

MAXWELL M GOODMAN MD
22265 GARRISON
WEST DEARBORN MI 48124

PAUL A GOODMAN MD
SINAI HOSP
DETROIT MI 48235

VIRGIL P GOODMAN MD
762 BEDFORD RD
GROSSE PTE PARK MI 48230

WARREN W GOODWIN MD
20101 JAMES COUZENS
DETROIT MI 48235

WILLIAM P GOODWIN MD
1616 BOSTON W
DETROIT MI 48206

MARVIN GORDON MD
DETROIT MEMORIAL HOSP
DETROIT MI 48226

MARTIN J GORELICK MD
23901 MICHIGAN AVE
DEARBORN MI 48124

STEPHEN V GORYL MD
21501 KELLY
EAST DETROIT MI 48021

SAML B GOSS MD
10 PETERBORO
DETROIT MI 48201

EDMOND J GOSTINE MD
9750 CHALMERS
DETROIT MI 48213

JAMES E GOTHAM MD
3825 BRUSH ST
DETROIT MI 48201

ABRAHAM G GOTMAN MD
987 E JEFFERSON AVE
DETROIT MI 48207

JACQUES S GOTTLIEB MD
951 E LAFAYETTE
DETROIT MI 48207

SALAH E A GOUDA MD
28633 HOOVER RD
WARREN MI 48093

RAYMOND S GOUX MD L
17566 MUIRLAND AVE
DETROIT MI 48221

AMADO GRABIEL MD
8600 S W 93RD CT
MIAMI FL 33143

JOS M GRACE MD L
31140 HUNTLEY SQUARE
BIRMINGHAM MI 48009

JOS A GRADY MD
946 THREE MILE DR
DETROIT MI 48230

JOHN G GRAHAM JR MD
491 LINCOLN RD
GROSSE PTE MI 48236

THEODORE N GRAHAM MD
2424 PURITAN
DETROIT MI 48238

FRANCIS L GRANGER MD
14160 GRATIOT AVE
DETROIT MI 48205

GEORGE R GRANGER MD
17800 E 8 MILE RD
HARPER WOODS MI 48236

ABRAHAM H GRANT MD
16300 W 9 MILE RD #121
SOUTHFIELD MI 48075

HEMAN E GRANT MD L
BOX 224
BABSON PARK FL 33827

HENRI L GRATTON MD L
12054 PREST
DETROIT MI 48227

JAMES H GRAVES MD
63 KERCHEVAL
GROSSE PTE FARMS MI 48236

HOWARD O GRAY M D
5050 JOY RD
DETROIT MI 48204

EDWARD W GREEN MD
CHILDRENS HOSPITAL
5224 ST ANTOINE
DETROIT MI 48202

ELLIS R GREEN MD L
10374 LAUREL
LIVONIA MI 48150

HENRY L GREEN MD
17214 JEANETTE
SOUTHFIELD MI 48075

LEWIS GREEN MD
13000 GRAND RIVER
DETROIT MI 48227

MILTON M GREEN MD
17000 W 8 MILE RD
SOUTHFIELD MI 48075

NELSON W GREEN MD
31815 SOUTHFIELD RD
BIRMINGHAM MI 48009

THOMAS GREEN JR MD
5050 JOY RD
DETROIT MI 48204

JACK R GREENBERG MD
15821 W SEVEN MILE RD
DETROIT MI 48235

JULIUS J GREENBERG MD
22940 SHERVINGTON
SOUTHFIELD MI 48075

MORRIS Z GREENBERG MD
9105 VAN DYKE
DETROIT MI 48213

STANLEY GREENBERG M D
20905 GREENFIELD
SOUTHFIELD MI 48075

JOHN B GREENE MD
2179 W GRAND BLVD
DETROIT MI 48208

THOMAS J GREENE MD
1054 FISHER BLDG
DETROIT MI 48202

WM T GREENLEE MD L
15053 MADDELEIN
DETROIT MI 48205

FRANK S GREENSLIT MD
2021 MONROE
DEARBORN MI 48124

CLARENCE W GREER MD A
4096 LESLIE
DETROIT MI 48238

GERTRUDE B GREGORY MD
P O BOX 3622
FORD TRACTOR PLANT
HIGHLAND PARK MI 48203

LOUIS J GREGORY MD
47 WEBBER PLACE
DETROIT MI 48236

FREDK C GREILING MD
710 NOTRE DAME
DETROIT MI 48230

JOHN H GRIFFIN MD
22101 MOROSS RD
DETROIT MI 48236

ROBERT J GRIFFIN MD
17401 MACK AVE
DETROIT MI 48224

SYDNEY J GRIFFITHS MD
15400 PLYMOUTH RD
DETROIT MI 48227

THOMAS J GRIFKA MD
1400 CHRYSLER EXPWY
DETROIT MI 48207

GREGORY J GRIMALDI MD A
905 HARCOURT
DETROIT MI 48230

ALEXANDER GRINSTEIN MD
18466 WILDEMERE
DETROIT MI 48221

S GRIVA-LIZLOVS MD
6033 MIDDLEBELT
GARDEN CITY MI 48135

JOHN GRIZ MD
3815 PELHAM RD
DEARBORN MI 48124

OTTO GROB MD A
900 CALLE DELOSAMIGOS
SANTA BARBARA CA 93105

FREDERICK J GROSE MD
19350 W 7 MILE RD
DETROIT MI 48219

DAVID S GUDES MD
1080 FISHER BLDG
DETROIT MI 48202

JOSE GUERRERO MD L
4285 GLENDALE
DETROIT MI 48238

OMAR GUEVARA MD
30900 FORD RD
GARDEN CITY MI 48135

WALTER GUEVARA MD
LAFAYETTE CLINIC
DETROIT MI 48207

JULIAN M GUIDOT MD
18714 GRAND RIVER
DETROIT MI 48223

ABILIO S GUIMARAES MD L
7301 SCHAFFER HWY
DEARBORN MI 48126

GEO E GUINAN MD L
5012 HOWE RD
WAYNE MI 48184

MOUNIR F GUINDI MD
23580 GENEVA
OAK PARK MI 48237

SAMI F GUINDI MD
1080 FISHER BLDG
DETROIT MI 48202

EDWIN R GUISE JR MD
HENRY FORD HOSPITAL
DETROIT MI 48202

ARTHUR E GULICK MD
4160 JOHN R
DETROIT MI 48201

ELISHA S GURDJIAN MD L
1553 WOODWARD AVE
DETROIT MI 48226

EUGENIA E GURSKIS MD
504 KALES BLDG
DETROIT MI 48226

MIGUEL R GUTIERREZ MD
4869 DANBURY DR
TROY MI 48084

V A GUTIERREZ MD
195 CRANBROOK CROSS RD
BIRMINGHAM MI 48010

BENJAMIN R GUTOW MD
12415 E 12 MILE RD
WARREN MI 48093

JOS F GUYON MD
WYANDOTTE HOSP
REHAB CENTER
2331 VAN ALSTYNE BLVD
WYANDOTTE MI 48192

DANIEL R GUYOT MD
3825 BRUSH
DETROIT MI 48201

JACK S GUYTON MD
2799 W GRAND BLVD
DETROIT MI 48202

ELAINE M HACKER MD
763 FISHER BLDG
DETROIT MI 48202

BENJAMIN F HADDAD M D
1010 MICH MUTUAL BLDG
DETROIT MI 48226

ELIAS D HADDAD MD
14636 E SEVEN MILE
DETROIT MI 48205

DONALD HADESMAN MD
985 E JEFFERSON
DETROIT MI 48207

B S HADJIMIHALOGLU MD
2429 E MILWAUKEE
DETROIT MI 48211

LESLIE P HAEFELE MD
29108 FORD RD
GARDEN CITY MI 48135

H H HAGERMOSER MD
412 EASTLAND CTR BLDG
DETROIT MI 48236

B H HAIDOSTIAN MD
18456 GRAND RIVER
DETROIT MI 48223

ELLEN R HAINES MD
525 SEYBURN
DETROIT MI 48214

LEONARD HAKING MD
14014 E 7 MILE RD
DETROIT MI 48205

G PETER HALEKAS MD
21727 MACK AVE
ST CLAIR SHORES MI 48080

WILLIAM A HALEY MD
781 E GRAND BLVD
DETROIT MI 48207

ARCH H HALL MD
3790 WOODWARD
DETROIT MI 48201

C ROBERT HALL MD A
23581 SENECA
OAK PARK MI 48237

RALPH E HALL MD L
DRUMMOND ISLAND
DRUMMOND MI 49726

RICHARD H HALL MD
28700 EIGHT MILE RD
FARMINGTON MI 48024

WINTHROP D HALL MD
5237 OAKMAN BLVD
DEARBORN MI 48126

LEONARD J HALLEN MD
1335 NICOLET PL
DETROIT MI 48207

RONALD C HAMAKER MD A
712 E PROSPECT
MARSHALL MI 49068

ROBT H HAMBURG MD
1515 DAV WHITNEY BLDG
DETROIT MI 48226

STUART W HAMBURGER MD
18400 SCHAEFER HWY
DETROIT MI 48235

EDWIN J HAMMER MD
16616 MACK AVE
DETROIT MI 48224

ROY W HAMMER MD
11455 E MCNICHOLS
DETROIT MI 48234

ARTHUR E HAMMOND MD L
1553 WOODWARD AVE
DETROIT MI 48226

JAMES L HAMMOND MD L
1006 MORSE ST
OCEANSIDE CA 92054

RONALD G HAMMOND MD
15830 FORT ST
SOUTHGATE MI 48192

JACK E HANDEL MD
DETROIT MEMORIAL HOSP
DETROIT MI 48226

JOHN W HANSEN MD R
715 W MICHIGAN #703
JACKSON MI 49201

KARL HANYI M D
7645 THORNWOOD
PLYMOUTH MI 48170

R JOHN HARDSTAFF MD L
648 NEFF RD
GROSSE PTE MI 48230

BARBARA A HARDT MD
1301 ORLEANS APT 303
DETROIT MI 48207

CLARENCE M HARDY MD
3745 MONROE
DEARBORN MI 48124

WARREN G HARDY MD
801 DAV WHITNEY BLDG
DETROIT MI 48226

WM W HARDY JR MD
HENRY FORD HOSPITAL
DETROIT MI 48202

ELY W HARELIK MD L
DET HOUSE CORRECTION
PLYMOUTH MI 48170

CAMILLE K E HARIZE MD
14807 W MCNICHOLS RD
DETROIT MI 48235

ROMAN W HARKAWAY MD
19120 VAN DYKE
DETROIT MI 48234

GARTH H HARLEY MD
451 GOLFCREST DR
DEARBORN MI 48124

LOUIS M HARLEY MD
4100 W MC NICHOLS RD
DETROIT MI 48221

WINFRED B HARM MD L
16150 OXLEY APT 101
SOUTHFIELD MI 48075

EDWIN L HARMON MD
745 BEDFORD RD
GROSSE PTE PARK MI 48230

R W F HARNETT MD
529 FISHER BLDG
DETROIT MI 48202

JAMES H HARPER MD
KIRWOOD GENERAL HOSP
DETROIT MI 48238

JESSE T HARPER MD
1110 DAV WHITNEY BLDG
DETROIT MI 48226

EDW B HARRINGTON MD
14853 MICHIGAN AVE
DEARBORN MI 48126

F L HARRINGTON M D
15901 W 9 MILE RD
SOUTHFIELD MI 48075

HARCOURT G HARRIS MD
13800 LIVERNOIS
DETROIT MI 48206

HAROLD H HARRIS MD R
1221 DREW C-1
CLEARWATER FL 33315

IVOR D HARRIS MD
1245 DAVID WHITNEY BLD
DETROIT MI 48226

WILLIAM A HARRITY MD
302 EASTLAND PROF BLDG
DETROIT MI 48236

CHARLES E HART M D
23845 VAN DYKE
CENTERLINE MI 48015

ZWI H HART MD
800 N GULLEY RD
DEARBORN MI 48128

HENRY H HARTKOP MD
20055 MACK AVE
DETROIT MI 48236

ROBT J HARTQUIST MD
1495 FORT ST
WYANDOTTE MI 48192

JOHN M HARTZELL MD
7815 E JEFFERSON
DETROIT MI 48214

CLYDE K HASLEY MD L
2320 N LASALLE GARDENS
DETROIT MI 48206

CARL E HASLEY MD R
16512 SHAFTSBURG
DETROIT MI 48219

ABDUL A HASSAN MD A
CHILDRENS HOSPITAL
DETROIT MI 48202

GERARD R HASSETT MD
ST MARYS HOSPITAL
LIVONIA MI 48151

WALTER W HASSIG MD
20914 KELLY
EAST DETROIT MI 48021

ORVILLE J HASTINGS MD L
15744 HARPER AVE
DETROIT MI 48224

VLADIMIR A HASZCZYC MD
3329 YEMANS
HAMTRAMCK MI 48212

HUBERT R HATHAWAY MD A
154 ENGLEWOOD RD
SPRINGFIELD OH 45504

WM S HAUBRICH MD
DIV OF GASTRO
SCRIPPS CLINIC &
RESEARCH FDTN
LA JOLLA CA 92037

GLEN E HAUSE MD
18520 GRAND RIVER
DETROIT MI 48223

I JEROME HAUSER MD
7411 THIRD AVE
DETROIT MI 48202

JOHN E HAUSER MD
405 NORTHLAND MED BLDG
SOUTHFIELD MI 48075

MAURICE J HAUSER MD A
7411 THIRD AVE
DETROIT MI 48202

RAOUF R HAWASH MD
19647 JOY RD
DETROIT MI 48228

DAVID B HAWTOF MD
15901 W 9 MILE RD
SOUTHFIELD MI 48075

ROYAL C HAYDEN JR MD
HENRY FORD HOSPITAL
DETROIT MI 48202

ALLEN L HAYES MD
17431 GREENFIELD
DETROIT MI 48235

LOUIS F HAYES MD
441 E JEFFERSON
DETROIT MI 48226

ROY S HAZEN MD
15121 W 7 MILE RD
DETROIT MI 48235

LEONARD P HEATH MD
1553 WOODWARD AVE
DETROIT MI 48226

LYLE E HEAVNER MD
17700 MACK AVE
GROSSE PTE MI 48224

THEOPHILUS H HEENAN MD
1553 WOODWARD AVE
DETROIT MI 48226

LOUIS E HEIDEMAN MD
3800 WOODWARD AVE
DETROIT MI 48201

EDWARD R HEIL MD
24111 SOUTHFIELD
SOUTHFIELD MI 48075

MARILYN HEINS MD
747 LAKELAND
GROSSE PTE MI 48236

RICHARD F HELDT MD
1951 MONROE BLVD
DEARBORN MI 48124

THOS J HELDT MD L
17 POPLAR PARK
PLEASANT RIDGE MI 48069

JEROME P HELMAN MD
18400 SCHAEFER
DETROIT MI 48235

NORMAN HELMAN MD M
13652 CANTARA
PANORAMA CITY CA 91402

MANUEL H HENDELMAN MD
17141 HAYES
DETROIT MI 48205

ALLISON B HENDERSON MD
9041 DEXTER BLVD
DETROIT MI 48206

ARTHUR B HENDERSON MD L
946 BEACONSFIELD RD
GROSSE PTE PARK MI 48230

CHAS W HENDERSON MD
20905 GREENFIELD RD
SOUTHFIELD MI 48075

FREDERIC C HENDERSON
19787 MACK
GROSSE PTE WOODS MI 48236

H R HENDERSON MD
3800 WOODWARD AVE 208
DETROIT MI 48201

HUGH W HENDERSON MD
18601 MACK AVE
DETROIT MI 48236

LESLIE T HENDERSON MD L
18101 E WARREN AVE
DETROIT MI 48224

ALAN K HENDRA MD
15540 HARPER
DETROIT MI 48224

FRED N HENIG MD
7605 W SEVEN MILE RD
DETROIT MI 48221

RAYMOND HENKIN MD
17228 SHERVILLA
SOUTHFIELD MI 48075

WM A HENKIN MD
18215 GREENFIELD
DETROIT MI 48235

ALAN T HENNESSEY MD
OAKWOOD HOSP
DEARBORN MI 48121

LAURENCE E HENRICH MD L
17589 ROXBURY AVE
SOUTHFIELD MI 48075

ROBERT C HENRY MD
653 RIVARD #202
DETROIT MI 48207

HAROLD B HERBST MD
7282 RIVERSTONE RD
BIRMINGHAM MI 48010

KLAUS HERGT MD
10909 W JEFFERSON
RIVER ROUGE MI 48218

HUGO R HERNANDEZ MD A
NORTHVILLE STATE HOSP
NORTHVILLE MI 48167

EDUARDO M HERRERO MD
21913 CANTERBURY
GROSSE ILE MI 48138

EDUARDO U HERRERO MD
21845 CANTERBURY
GROSSE ILE MI 48138

ROSE E HERROLD M D L
1277 E GRAND BLVD
DETROIT MI 48211

ROY F HERSCHELMANN MD A
3343 GRATIOT AVE
DETROIT MI 48207

ERNEST A HERSHEY JR MD
641 DAVID WHITNEY BLDG
DETROIT MI 48226

JACK H HERTZLER MD
3011 W GRAND BLVD
DETROIT MI 48202

JOHN T HERWICK MD
2799 W GRAND BLVD
DETROIT MI 48202

MURRAY W HESS MD
30650 BRUCE
FRANKLIN MI 48025

PHILIP C HESSBURG MD
HENRY FORD HOSP
DETROIT MI 48202

LOUIS F HEYMAN MD
19201 W SEVEN MILE RD
DETROIT MI 48219

C S HEYNER MD
15901 W 9 MILE RD #400
SOUTHFIELD MI 48075

FREDK J HEYNER MD
15901 W 9 MILE RD #400
SOUTHFIELD MI 48075

STANLEY A HEYNER MD
3424 OAKMAN BLVD
DETROIT MI 48204

FREDK G HICKS MD
1000 WESTWOOD
BIRMINGHAM MI 48009

ROBERT H HIGH MD
HENRY FORD HOSP
DETROIT MI 48202

J GILBERTO HIGUERA MD
13700 WOODWARD AVE
DETROIT MI 48203

EDWARD J HILL JR MD
949 DAV WHITNEY BLDG
DETROIT MI 48226

GEORGE C HILL MD
5050 JOY RD
DETROIT MI 48204

RAYMOND D HILL MD
14551 SOUTHFIELD
ALLEN PARK MI 48101

WELFORD T HILL MD
6303 MACK AVE
DETROIT MI 48207

SIDNEY J HILLENBERG MD
19350 W 7 MILE RD
DETROIT MI 48219

GLENN I HILLER MD
15901 W 9 MILE RD #610
SOUTHFIELD MI 48075

JOHN W HILLYER MD
3700 WEST ROAD
TRENTON MI 48183

WM E HILTON MD L
5951 YORKSHIRE RD
DETROIT MI 48224

D F HINCHMAN MD
10865 FARMINGTON RD
LIVONIA MI 48150

LEO J HIRSCH MD
1190 E 12 MILE RD
MADISON HEIGHTS MI 48071

LORE HIRSCH MD
212 S MELBORN
DEARBORN MI 48124

A H HIRSCHFELD MD
3790 WOODWARD
DETROIT MI 48201

CECELIA HISSONG MD
4407 ROEMER
DEARBORN MI 48126

F L HOAGLAND MD A
716 E GRAND BLVD
DETROIT MI 48207

DONALD V HOBBS MD
27305 SOUTHFIELD RD
LATHRUP VILLAGE MI 48075

MORTON M HOCHMAN MD
16633 PLYMOUTH RD
DETROIT MI 48227

A ALBERTO HODARI MD
CRITTENTON HOSPITAL
DETROIT MI 48206

JASON HODGES MD
26401 HARPER
ST CLAIR SHORES MI 48081

CHAS P HODGKINSON MD
17546 MEADWOOD AVE
LATHRUP VILLAGE MI 48075

THOS HOFFER MD
5825 ALLEN RD
ALLEN PARK MI 48101

BEN G HOFFMAN MD
19545 SHREWSBURY
DETROIT MI 48221

EDWARD A HOFFMAN MD
7615 W VERNOR HWY
DETROIT MI 48209

EDWIN S HOFFMAN MD R
8106 E JEFFERSON AVE
DETROIT MI 48214

HARRY Y HOFFMAN MD
15085 E SEVEN MILE RD
DETROIT MI 48205

HENRY A HOFFMAN MD
10015 E OUTER DR
DETROIT MI 48224

LOUIS HOFFMAN MD
21701 W 11 MILE RD #9
SOUTHFIELD MI 48075

MILTON C HOFFMAN MD
18555 E WARREN
DETROIT MI 48236

AZAT HOGIKYAN MD
16901 W MCNICHOLS RD
DETROIT MI 48235

JEAN M HOLDREDGE MD
3011 W GRAND BLVD
DETROIT MI 48202

F WAYNE HOLLINGER MD
5-267 GEN MOTORS BLDG
DETROIT MI 48202

HENRY B HOLLIS MD
6809 SIRENA
DETROIT MI 48210

JANET L HOLLOWAY MD
7430 SECOND
DETROIT MI 48202

M L HOLLOWELL MD
10720 W 7 MILE RD
DETROIT MI 48221

GEO F HOLMES MD
14729 CHAMPAIGN
ALLEN PARK MI 48101

CHAS J HOLT JR MD
1210 S OXFORD
GROSSE PTE MI 48236

HENRY T HOLT MD
5050 CASS ST
DETROIT MI 48202

W S HOLT JR MD
MT CARMEL HOSP
DETROIT MI 48235

EUGENE A HOMEISTER MD
12925 PENNSYLVANIA AVE
WYANDOTTE MI 48192

JOSEPH C HONET MD
SINAI HOSPITAL
DETROIT MI 48235

FRED L HONHART MD L
1405 BERKSHIRE ROAD
GROSSE PTE MI 48230

ANDREW J HOPKINS MD
4407 ROEMER
DEARBORN MI 48126

GEORGE C HOPKINS MD
8432 E JEFFERSON
DETROIT MI 48214

SCOVELL M HOPKINS MD
910 DAV BRODERICK TWR
DETROIT MI 48226

GEORGE H HOPSON MD
20101 JAMES COUZENS
DETROIT MI 48235

EARL J HORKINS MD
32316 GRAND RIVER
FARMINGTON MI 48024

ROBT C HORN JR MD
2799 W GRAND BLVD
DETROIT MI 48202

ROBERT J HORNBECK MD
31500 SCHOOLCRAFT RD
LIVONIA MI 48150

HUGO O HORNY MD
1365 CASS AVE
DETROIT MI 48226

EUGENE D HORRELL MD
3800 WOODWARD
DETROIT MI 48201

RICHARD P HORSCH MD
32900 FIVE MILE RD
LIVONIA MI 48154

REECE H HORTON MD
606 NORTHLAND MED CTR
SOUTHFIELD MI 48075

JAMES J HORVATH MD
1553 WOODWARD AVE
DETROIT MI 48226

LORIS M HOTCHKISS MD
33220 W 7 MILE
LIVONIA MI 48152

PHILIP J HOWARD MD L
HENRY FORD HOSP
DETROIT MI 48202

WILLIAM K HOWARD MD
1800 TUXEDO
DETROIT MI 48206

BERT F HOWELL MD
10800 WHITTIER RD
DETROIT MI 48224

HOMER A HOWES MD
1515 DAV WHITNEY BLDG
DETROIT MI 48226

HOWARD T HOWLETT MD
868 FISHER BLDG
DETROIT MI 48202

PEDRO G HOYOS MD
55 N DEEPLANDS
GROSSE PTE SHORES MI 48236

LOUIS HROMADKO MD L
7375 PARKSTONE LANE
BIRMINGHAM MI 48010

JOHN P HUBBARD JR MD L
1171 S E SECOND
DEERFIELD BEACH FL 33441

PHILIP J HUBER MD
1724 BASSETT
ROYAL OAK MI 48067

J STEWART HUDSON MD L
114 LOTHROP
DETROIT MI 48236

WM A HUDSON MD L
HUDSONAKERS
JASPER AR 72641

E RAE HUDSPETH MD
763 FISHER BLDG
DETROIT MI 48202

WILFRED A HUEGLI MD
16840 E WARREN AVE
DETROIT MI 48224

H HORNE HUGGINS MD
8355 GRATIOT
DETROIT MI 48213

CALVIN H HUGHES MD
19959 VERNIER
HARPER WOODS MI 48236

JOHN A HUGHES MD A
4407 ROEMER
DEARBORN MI 48126

ARTHUR L HUGHETT MD
19959 VERNIER
HARPER WOODS MI 48236

ARCHIE G HULICK MD
1600 TUXEDO
DETROIT MI 48206

LEROY W HULL MD L
6364 COWELL RD
BRIGHTON MI 48116

HUGO V HULLERMAN MD
CHILDRENS HOSPITAL
DETROIT MI 48202

H ROSS HUME JR MD
3800 WOODWARD AVE #406
DETROIT MI 48201

JAMES J HUMES MD
ST JOHN HOSPITAL
DETROIT MI 48236

THADDEUS S HUMINSKI MD
19244 VAN DYKE AVE
DETROIT MI 48234

ARTHUR R HUMMEL MD
1020 3 MILE DR
GROSSE PTE MI 48236

THEODORE H HUNT MD
19431 VAN DYKE AVE
DETROIT MI 48234

VERNE G HUNT MD L
1553 WOODWARD AVE
DETROIT MI 48226

DONALD G HUNTER MD
3245 E JEFFERSON
DETROIT MI 48207

ROBERT B HUNTER MD
HENRY FORD HOSP
DETROIT MI 48202

CHAS W HUSBAND MD L
19450 ARGYLE CRESCENT
DETROIT MI 48203

RAYMOND C HUSBAND MD
14500 W MC NICHOLS
DETROIT MI 48235

M COLTON HUTCHINS MD
3011 W GRAND BLVD
DETROIT MI 48202

JARVIS M HYATT MD
22340 MICHIGAN AVE
DEARBORN MI 48124

FREDK W HYDE JR MD
GRACE HOSPITAL
DETROIT MI 48201

JOHN R HYLAND MD
17200 MACK
DETROIT MI 48224

ALIQEMAL HYSNI MD
8011 W VERNOR
DETROIT MI 48209

PETER H IACOBELL MD
19300 VAN DYKE
DETROIT MI 48234

M IACOBELLIS MD
22159 W OUTER DRIVE
DEARBORN MI 48124

GARNET T ICE MD
8401 WOODWARD AVE
DETROIT MI 48202

LUIS J IGLESIAS MD
3535 W 13 MILE RD
ROYAL OAK MI 48072

ELI J IGNA MD
584 LAKELAND
GROSSE PTE MI 48230

ANTONIO IGNAGNI MD
21470 SLOAN DR
DETROIT MI 48236

KAMIL IMAMOGLU MD A
1400 CHRYSLER EXPWY
DETROIT MI 48207

NAPOLEON C IMPERIO MD
22231 W OUTER DR
DEARBORN MI 48124

SAMUEL INDENBAUM MD
18400 SCHAEFER HWY
DETROIT MI 48235

NARCISO O INEZ MD
3800 WOODWARD AVE
DETROIT MI 48201

MYUNG YUL INE MD
1800 TUXEDO
DETROIT MI 48206

HARRY O INGBERG MD
261 BRADY
DETROIT MI 48201

EARLE A IRVIN MD
FORD MOTOR CO AMERICA
DEARBORN MI 48121

WM A IRWIN MD
16001 9 MILE RD
SOUTHFIELD MI 48075

HAROLD E ISAACSON MD
15361 PLYMOUTH RD
DETROIT MI 48227

JO D ISAACSON MD
26008 PEMBROKE
HUNTINGTON WOODS MI 48070

F F ISHAC MD
38241 SOUTHFARM
NORTHVILLE MI 48167

BARNEY B ISRAEL MD L
663 FISHER BLDG
DETROIT MI 48202

KENNETH ISRAEL MD
10607 W 7 MILE RD
DETROIT MI 48221

H DAVID ITKIN MD
2900 S FORT ST
DETROIT MI 48217

HERBERT T IWATA MD
7611 PATTON AVE
DETROIT MI 48228

BERNICE IZNER MD
16500 N PARK DR #410
SOUTHFIELD MI 48075

DONALD V JABLONSKI MD
3800 WOODWARD AVE
DETROIT MI 48201

DAVID JACKNOW MD
60 W HANCOCK
DETROIT MI 48201

NANCY E JACKSON MD
33750 FREEDOM RD
FARMINGTON MI 48024

WINSTON B JACKSON MD
5050 JOY RD
DETROIT MI 48204

DAVID M JACOBS MD
10601 W 7 MILE RD
DETROIT MI 48221

HOWARD JACOBS MD
18241 GREENFIELD
DETROIT MI 48235

LYLE F JACOBSON MD
5224 ST ANTOINE
DETROIT MI 48202

SAML D JACOBSON MD
WAYNE CO GENL HOSP
ELOISE MI 48132

WAYNE N JACOBUS MD
20055 MACK AVE
GROSSE PTE MI 48236

J R JACONETTE MD
MT CARMEL MERCY HOSP
DETROIT MI 48235

GROVE A JAEGER MD
11711 MINDEN
DETROIT MI 48205

CLARENCE N JAEKEL MD L
433 LEXINGTON
GROSSE PTE MI 48236

DONALD J JAFFAR MD
15901 W 9 MILE RD #514
SOUTHFIELD MI 48075

HAROLD W JAFFE M D
1073 FISHER BLDG
DETROIT MI 48202

JACOB JAFFE MD A
11740 WILSHIRE
LOS ANGELES CA 90025

LOUIS JAFFE MD
18662 MUIRLAND
DETROIT MI 48221

WM E JAHSMAN MD R
501 MANDALAY AVE G18
CLEARWATER BEACH FL 33515

RICHARD WM JAKACKI MD
36157 SHERWOOD
LIVONIA MI 48154

THOS J JAMIESON MD L
2058 FERRIS
LINCOLN PARK MI 48146

NATALIA J JANICKI MD
ELOISE HOSP
ELOISE MI 48132

HAROLD F JARVIS MD
360 MOROSS
DETROIT MI 48236

LAWRENCE J JASION MD A
11945 PAYTON
DETROIT MI 48224

RICHARD V JAYNES MD
6033 MIDDLEBELT
GARDEN CITY MI 48135

BENJ JEFFRIES MD
19959 VERNIER RD
HARPER WOODS MI 48236

WM JEND JR MD
1365 CASS AVE
DETROIT MI 48226

BARBARA J JENKINS MD
19250 CANTERBURY
DETROIT MI 48221

ELWOOD A JENKINS MD
610 DAV WHITNEY BLDG
DETROIT MI 48226

CHAS G JENNINGS MD
1585 ALINE DR
DETROIT MI 48236

WILLIAM H JEVONS MD
8425 TWELVE MILE RD
WARREN MI 48093

F C JEWELL MD
7220 GRATIOT AVE
DETROIT MI 48213

JOHN S JEWELL MD
2021 MONROE SUITE 203
DEARBORN MI 48124

MARVIN R JEWELL MD
CHILDRENS HOSPITAL
DETROIT MI 48202

PATRICK F JEWELL MD
EASTLAND CENTER
PROF BLDG #232
HARPER WOODS MI 48225

MARION W JOCZ MD R
1501 N RIVER RD #102
ST CLAIR MI 48079

EMERY O JODAR MD L
P O BOX 667
HUGHSON CA 95326

LOYAL W JODAR MD
18412 MACK
GROSSE PTE MI 48236

HUBERT R JOHN MD L
1574 SODON LAKE DR
BLOOMFIELD HILLS MI 48013

ARAN S JOHNSON MD
642 BLAIRMOOR CT
GROSSE PTE WOODS MI 48236

ARTHUR J JOHNSON MD
3800 WOODWARD #514
DETROIT MI 48201

GAGE JOHNSON MD
2785 S FORT ST
DETROIT MI 48217

THOS D JOHNSON MD
18530 GRAND RIVER
DETROIT MI 48223

VERNE E JOHNSON MD
2119 MONROE AVE
DEARBORN MI 48124

VERNON P JOHNSON MD L
21327 HARPER AVE
ST CLAIR SHORES MI 48080

WILBUR E JOHNSON M D
14654 GRATIOT
DETROIT MI 48205

WM H M JOHNSON MD L
7157 63 MICHIGAN
DETROIT MI 48210

EVERETT V JOHNSTON MD L
4726 N W 49TH CT
FT LAUDERDALE FL 33313

HERBERT C JOHNSTON MD
3001 MILLER RD
FORD MOTOR CO
ROUGE PLANT
DEARBORN MI 48121

JOS A JOHNSTON MD L
HENRY FORD HOSP
DETROIT MI 48202

WM E JOHNSTON MD L
9000 E JEFFERSON #25-9
DETROIT MI 48214

BENJ I JOHNSTONE MD L
530 FISHER BLDG
DETROIT MI 48202

EUCLIDE V JOINVILLE MD L
28 W ADAMS AVE
DETROIT MI 48226

CECIL R JONAS MD
8942 DEXTER
DETROIT MI 48206

ARNOLD M JONES MD
3706 STURTEVANT
DETROIT MI 48206

G RICHARD JONES MD
18412 MACK AVE
DETROIT MI 48236

RICHARD J JONES MD
MT CARMEL MERCY HOSP
DETROIT MI 48235

ROY D JONES MD L
104 BIRCH CT
FOREST HILLS
HOLIDAY FL 33589

WM J JONES MD
8209 ALLEN RD
ALLEN PARK MI 48101

THAD H JOOS MD
20361 MACK AVE
GROSSE PTE WOODS MI 48236

PRESCOTT JORDAN JR MD
5224 ST ANTOINE
DETROIT MI 48202

RAMON R JOSEPH MD
WAYNE CO GEN HOSP
ELOISE MI 48132

DAYA P JOSHI MD
987 E JEFFERSON AVE
DETROIT MI 48207

STANLEY J JOYCE MD L
2040 W MCNICHOLS RD
DETROIT MI 48203

MYRON H JOYRICH MD
SINAI HOSPITAL
DETROIT MI 48235

BENJ JULIAR MD
17305 MUIRLAND AVE
DETROIT MI 48221

JOSEPH F JULIAR MD
20501 OLDHAM RD #206
SOUTHFIELD MI 48075

JOHN B JUNCKER MD
OAKWOOD HOSPITAL
DEARBORN MI 48124

R V JUNGWIRTH MD
19350 W MCNICHOLS RD
DETROIT MI 48219

JAMES E KACKLEY MD
18495 MACK
DETROIT MI 48236

THOMAS R KAIN MD
3245 E JEFFERSON AVE
DETROIT MI 48207

HENRY D KAINE MD
3011 W GRAND BLVD
DETROIT MI 48202

BERNARD S KALAYJIAN MD R
30676 HARLINCIN CT
FRANKLIN MI 48025

NATHAN KALICHMAN MD
23300 GREENFIELD #123
OAK PARK MI 48237

RUDOLF W KALLENBACH MD
388 INKSTER RD
INKSTER MI 48141

HERBERT I KALLET MD L
651 FISHER BLDG
DETROIT MI 48202

MAERIT B KALLET MD
1800 TUXEDO
DETROIT MI 48206

DAVID KALLMAN MD L
2351 W GRAND BLVD
DETROIT MI 48208

LEO KALLMAN MD
2351 W GRAND BLVD
DETROIT MI 48208

REUBEN R KALLMAN MD
2631 WOODWARD AVE
DETROIT MI 48201

ANGELOS A KAMBOURIS MD
18255 W MCNICHOLS RD
DETROIT MI 48219

RICHARD S KAMIL MD
14438 W MCNICHOLS
DETROIT MI 48235

ROBERT F KANDEL MD
HENRY FORD HOSP
DETROIT MI 48202

ARCHIBALD V KANE MD
BOX 1108 NORTHLAND CTR
SOUTHFIELD MI 48075

SELMA KANSA M D
19431 VAN DYKE
DETROIT MI 48234

HERMAN KANTER MD
16222 OXLEY RD APT 103
SOUTHFIELD MI 48075

SHELDON M KANTOR MD
17550 W 12 MILE RD
SOUTHFIELD MI 48075

DON I KAPETANSKY MD
17376 SCHAEFER
DETROIT MI 48235

NATHAN J KAPETANSKY MD
17376 SCHAEFER
DETROIT MI 48235

WALTER A KAPLITA MD
60 FONTANA LANE
GROSSE PTE SHORES MI 48236

K H KAPPHAHN MD
HENRY FORD HOSP
DETROIT MI 48202

TURGUT KARABEYOGLU MD
NORTHVILLE STATE HOSP
NORTHVILLE MI 48167

B KARADELOGLOU MD
817 VIRGINIA PARK
DETROIT MI 48202

PHILIP C KARAMATAS MD
10822 W WARREN
DEARBORN MI 48126

SAUL KARCH MD
18080 MUIRLAND
DETROIT MI 48221

ARTHUR A KASELEMAS MD
22341 W 8 MILE RD
DETROIT MI 48219

A S KASIBORSKI MD
2300 OAK STREET
WYANDOTTE MI 48192

JOS A KASPER MD L
1011 CADIEUX RD
GROSSE PTE PARK MI 48230

ALBERT J KASPOR MD
20901 MOROSS RD
DETROIT MI 48236

ARNOLD KASS MD
1316 DAVID STOTT BLDG
DETROIT MI 48226

LAWRENCE KATZ MD
987 E JEFFERSON
DETROIT MI 48207

MARTIN KATZ MD
12794 VERONICA DR
SOUTHGATE MI 48192

IRVING S KATZMAN MD L
848 FISHER BLDG
DETROIT MI 48202

JACK H KAUFMAN MD
17421 GREENFIELD
DETROIT MI 48235

LOUIS W KAUFMAN MD
15901 W NINE MILE RD
SOUTHFIELD MI 48075

WILLIAM H KAUFMAN MD
10149 MICHIGAN AVE
DEARBORN MI 48126

JAMES KAWCHAK M D
FORD MOTOR CO
DEARBORN MI 48121

LUCIAN KAWECKI MD
10734 HART AVE
HUNTINGTON WOODS MI 48070

CONRAD A KAWEL JR MD
10955 FARMINGTON RD
LIVONIA MI 48150

CENGIZ KAYI MD
NORTHVILLE STATE HOSP
NORTHVILLE MI 48167

MORRIS KAZDAN MD
4619 ALLEN ROAD
ALLEN PARK MI 48101

EDGAR B KEEMER JR MD
1111 DAV WHITNEY BLDG
DETROIT MI 48226

HENRY J KEHOE MD

RACHEL H C B KEITH MD
5050 JOY RD
DETROIT MI 48204

FRANK J KELLEY MD
853 FISHER BLDG
DETROIT MI 48202

A P KELLY JR MD
HENRY FORD HOSP
DETROIT MI 48202

EDWARD W KELLY JR MD
156 HARMON ST
DETROIT MI 48202

JOHN J KELLY MD
14729 CHAMPAIGN
ALLEN PARK MI 48101

L J KELLY MD
14015 GRATIOT
DETROIT MI 48205

VICTOR A KELMENSON MD
7356 12TH ST
DETROIT MI 48206

MALCOLM J KELSON MD
1045 HARVARD
DETROIT MI 48230

JAMES M KENNARY JR MD
4900 CADIEUX RD
DETROIT MI 48224

DONALD J KENNEDY MD
410 NORTH SHORE DR
ST CLAIR SHORES MI 48080

JAMES E KERMATH MD
15101 SOUTHFIELD
ALLEN PARK MI 48101

MELVIN O KERNICK MD
13700 WOODWARD AVE
HIGHLAND PARK MI 48203

GEORGE R KERWIN MD
22149 CHATSFORD CIR
SOUTHFIELD MI 48075

KARL J KESSEL MD
21421 KELLY RD
EAST DETROIT MI 48021

CHAS KESSLER MD
18241 GREENFIELD
DETROIT MI 48235

JOHN W KEYES MD
HENRY FORD HOSP
DETROIT MI 48202

TRILOK S KHANNA MD
25210 GRAND RIVER
DETROIT MI 48240

ELIE R KHOURY MD
3027 N WOODWARD AVE
ROYAL OAK MI 48072

RONALD B KIHN MD
V A HOSPITAL
ALLEN PARK MI 48101

CHAS G KILLINS MD
8100 E JEFFERSON
DETROIT MI 48214

K K KIMBERLIN JR M D
11110 MORANG DRIVE
DETROIT MI 48224

EDWARD D KING MD L
270 RIVARD
GROSSE PTE MI 48230

MELBOURNE J KING MD
5435 W VERNOR HWY
DETROIT MI 48209

ROY C KINGSWOOD MD L
EXCELLO CORP BOX 386
DETROIT MI 48232

JOHN L KITZMILLER MD
15901 W 9 MILE RD
SOUTHFIELD MI 48075

ROGER G KLAIBER MD
1541 EDSEL DRIVE
TRENTON MI 48183

HERMAN KLEIN MD
5030 WALLBROOK
BIRMINGHAM MI 48010

HOWARD A KLEIN MD
1846 DAV WHITNEY BLDG
DETROIT MI 48226

SANDER P KLEIN MD
14825 W MC NICHOLS RD
DETROIT MI 48235

SHMARYA KLEINMAN MD L
1800 TUXEDO
DETROIT MI 48206

KARL S KLICKA MD
33101 ANNAPOLIS
WAYNE MI 48184

DAVID KLIGER MD L
7756 SOUTHFIELD
DETROIT MI 48228

M M KLIMCHUK MD
620 EASTLAND CENTER
PROFESSIONAL BLDG
HARPER WOODS MI 48225

EDW J KLIMKOWSKI MD
15101 PLYMOUTH RD
DETROIT MI 48227

GEORGE A KLING MD
HARPER HOSPITAL
DETROIT MI 48201

MURRAY G KLING MD
22341 W EIGHT MILE
DETROIT MI 48219

GEORG H E KLUTKE MD
2841 MONROE
DEARBORN MI 48124

CASSANDRA M KLYMAN MD
20905 GREENFIELD
SOUTHFIELD MI 48075

EARL J KNAGGS MD
2367 FORT ST
WYANDOTTE MI 48192

FLOYD B KNAPP MD R
202 MAPLE GROVE AVE
PRUDENVILLE MI 48651

GARY H KNAPP MD
23611 GODDARD
TAYLOR MI 48180

WM L KNAPP MD
27740 DEVONSHIRE DR
SOUTHFIELD MI 48075

ROBT S KNIGHTON MD
2799 W GRAND BLVD
DETROIT MI 48202

EDMUND J KNOBLOCH MD L
5933 CHENE ST
DETROIT MI 48211

STUART A KNOTT MD
100 OAK ST
WYANDOTTE MI 48192

ROSS M KNOX MD L
3180 FORT ST
LINCOLN PARK MI 48146

SIDNEY D KOBERNICK MD
6767 W OUTER DR
DETROIT MI 48235

JOSEF M KOBILJAK MD
14876 WARWICK
ALLEN PARK MI 48101

STEFAN H KOBILJAK MD
3516 FORT STREET
LINCOLN PARK MI 48146

EUGENE J KOCHKODAN MD
2799 W GRAND BLVD
DETROIT MI 48202

RAYMOND H KOEBEL MD L
409 N SHORE DR
ST CLAIR SHORES MI 48080

BENJAMIN F KOEPKE MD
35550 MICHIGAN AVE
WAYNE MI 48184

EDWARD J KOERBER MD L
42 BRIARCLIFF PL
DETROIT MI 48236

NATALIO KOGAN MD
3379 PIQUETTE
DETROIT MI 48211

CONSTANTINE S KOGUT MD
18181 W 12 MILE RD
LATHRUP VILLAGE MI 48075

RAYMOND J KOKOWICZ MD
19440 VAN DYKE
DETROIT MI 48234

ISADORE I KOLMAN MD
1800 TUXEDO
DETROIT MI 48206

HARVEY J KOMORN MD
17000 W EIGHT MILE RD
SOUTHFIELD MI 48075

JOHN D KONDOMERKOS MD
33020 PALMER ROAD
WAYNE MI 48184

LEIGHTON N L KONG MD
GRACE HOSP
DETROIT MI 48201

EDW T KONNO MD
1400 CHRYSLER FREEWAY
DETROIT MI 48207

JOE M KOPMEYER JR MD
702 PARKMAN
BLOOMFIELD HILLS MI 48013

VALENTINE L KORAN MD
1306 KALES BLDG
DETROIT MI 48226

DOROTHY G KOREMAN MD
1400 CHRYSLER EXPWY
DETROIT MI 48207

LOUIS KOREN MD
650 DAV WHITNEY BLDG
DETROIT MI 48226

THOMAS E KORNACKI MD A
3461 CAMBRIDGE
DETROIT MI 48235

LYLE W KORUM MD
18585 E WARREN ST
DETROIT MI 48236

H K KOSCHNITZKE MD
15101 SOUTHFIELD
ALLEN PARK MI 48101

ADAM W KOSSAYDA MD
15324 MICHIGAN AVE
DEARBORN MI 48126

DENNIS D KOVAN MD
16965 HAMILTON AVE
HIGHLAND PARK MI 48203

JOHN J KOWALESKI MD
3755 FORT ST
LINCOLN PARK MI 48146

ANTHONY E KOZLINSKI MD
2195 E GRAND BLVD
DETROIT MI 48211

K L KRABBENHOFT MD
3825 BRUSH ST
DETROIT MI 48201

RAYMOND B KRAFT MD R
700 S OCEAN BLVD
BOCA RATON FL 33432

RUTH M KRAFT M D
19164 DEVONSHIRE RD
BIRMINGHAM MI 48009

BERNARD KRAKAUER MD
17716 W SEVEN MILE RD
DETROIT MI 48235

EDWARD W KRASS MD
11088 GRATIOT AVE
DETROIT MI 48213

JOHN J KRAUS MD
16840 E WARREN AVE
DETROIT MI 48224

CHARLES J KRAWEC MD
MT CARMEL MERCY HOSP
DETROIT MI 48235

WM T KREBS MD
16419 E WARREN AVE
DETROIT MI 48224

GEO E KREINBRING MD
14295 E 7 MILE RD
DETROIT MI 48205

JOHN C KRETZSCHMAR MD
660 E GRAND BLVD
DETROIT MI 48207

DAVID A KREVSKY MD
8449 PARK
ALLEN PARK MI 48101

HAROLD KREVSKY MD
8449 PARK AVENUE
ALLEN PARK MI 48101

SEYMOUR KREVSKY MD
732 FISHER BLDG
DETROIT MI 48202

HERBERT KRICKSTEIN MD
22101 MOROSS RD
DETROIT MI 48236

EARL G KRIEG MD A
134 N WATER ST
MARINE CITY MI 48039

HARLEY L KRIEGER MD R
11390 STRATHMOOR
DETROIT MI 48227

KARL T KRISTEN MD
MT CARMEL MERCY HOSP
DETROIT MI 48235

MAURICE J KRITCHMAN MD L
23237 PROVIDENCE DR
APARTMENT 301
SOUTHFIELD MI 48075

LAWRENCE A KROHA MD
15124 KERCHEVAL AVE
DETROIT MI 48230

LAWRENCE H KROHN MD
24340 W MCNICHOLS RD
DETROIT MI 48219

H HARVEY V KROLL MD
21327 HARPER AVE
ST CLAIR SHORES MI 48080

RONALD L KROME MD
1326 ST ANTOINE ST
DETROIT MI 48226

JAMES A KRUG MD
32238 SCHOOLCRAFT
LIVONIA MI 48150

LAWRENCE KRUGEL MD
19481 LIVERNOIS
DETROIT MI 48221

EDWARD A KRULL MD
482 RIVARD BLVD
GROSSE PTE MI 48230

FRANCIS X KRYNICKI MD L
2717 GOLFVIEW DR
TROY MI 48084

JOS L KUBANEK MD L
23134 MYRTLE
DEARBORN MI 48128

FRANCIS S KUCMIERZ MD
18934 VAN DYKE AVE
DETROIT MI 48234

NED N KUEHN MD
20203 WELLESLEY BLVD
BIRMINGHAM MI 48010

JAMES M KUHLMAN MD
3800 WOODWARD AVE
DETROIT MI 48201

ALBERT A KUHN MD
635 W SEVEN MILE RD
DETROIT MI 48203

HENRY H KUHN MD
635 W SEVEN MILE RD
DETROIT MI 48203

RICHARD F KUHN MD
1700 JUNCTION AVE
DETROIT MI 48209

WALTER F KUJAWSKI MD
17800 E EIGHT MILE RD
DETROIT MI 48236

HAROLD J KULLMAN MD A
930 BEECHMONT
DEARBORN MI 48124

LIONEL V KURAN MD
14853 MICHIGAN
DEARBORN MI 48126

JOS A KURCZ MD
7433 MICHIGAN AVE
DETROIT MI 48210

IRVIN J KURTZ MD
25210 GRAND RIVER
DETROIT MI 48240

RAYMOND S KURTZMAN MD
DETROIT MEMORIAL HOSP
DETROIT MI 48226

JOHN D KUTSCHE MD
3794 FORT ST
TRENTON MI 48183

BENJ KVIETYS MD
27235 JOY RD
DEARBORN MI 48127

S A KWASIBORSKI MD
2300 OAK ST
WYANDOTTE MI 48192

WM V KYLE JR MD
8780 GRAND RIVER
DETROIT MI 48204

JAMES M LABERGE MD
100 OAK
WYANDOTTE MI 48192

LEONARD W LACHOVER MD
20211 GREENFIELD
DETROIT MI 48235

LAWRENCE S LACKEY MD
310 VISGER
RIVER ROUGE MI 48218

GEORGE E LACROIX MD
695 VAUGHAM RD
BLOOMFIELD HILLS MI 48013

DAVID C LADERACH MD
1704 IROQUOIS
DETROIT MI 48214

PHILIP J LAFATA MD
15370 LEVAN RD
LIVONIA MI 48154

ALFRED D LA FERTE MD L
667 NEFF ROAD
GROSSE PTE MI 48230

M M LAHAM MD
2929 FORT ST
WYANDOTTE MI 48192

JOSEPH J LAHOOD MD A
771 LAKESHORE DR
GROSSE PTE SHORES MI 48236

MICHAEL J LAHOOD MD
20001 GREENFIELD
DETROIT MI 48235

RAYMOND J LAIGE MD A
PO BOX 1259
DETROIT MI 48231

LOUIS J LAJOIE MD
601 PIQUETTE
DETROIT MI 48202

GEORGE C LAKATOS MD
33020 PALMER
WAYNE MI 48184

ROBT C LAKE MD
8445 E JEFFERSON
DETROIT MI 48214

ALAN C LAKIN MD
17431 GREENFIELD
DETROIT MI 48235

MERVYN H LAKIN MD
18900 W TEN MILE RD
SOUTHFIELD MI 48075

CHAS B LAKOFF MD L
8233 W CHICAGO BLVD
DETROIT MI 48204

MANULAL LALA MD A
GRACE HOSPITAL
DETROIT MI 48201

CONRAD R LAM MD
HENRY FORD HOSPITAL
DETROIT MI 48202

FRANK A LAMBERSON MD
31435 BINGHAM RD
BIRMINGHAM MI 48010

JAMES V LAMMY MD
20867 MACK
DETROIT MI 48236

RICHARD L LAMONT MD
3815 PELHAM RD
DEARBORN MI 48124

GAETAN LAMONTAGNE MD
13479 NORTHLINE
SOUTHGATE MI 48192

HAROLD H LAMPMAN MD L
3011 W GRAND BLVD
DETROIT MI 48202

JAMES W LANDERS MD
1507 SUNNINGDALE
GROSSE PTE WOODS MI 48236

MAURICE B LANDERS MD
275 W GRAND BLVD
DETROIT MI 48216

ERNST F LANG MD
3790 WOODWARD
DETROIT MI 48201

WM A LANGE MD
3790 WOODWARD AVE
DETROIT MI 48201

JOHN D LANGSTON MD
1420 ST ANTOINE ST
DETROIT MI 48226

GEO M LANING MD L

EUGENE H LANSING MD
33116 PALMER RD
WESTLAND MI 48184

MANDELL LANSKY MD
16339 E WARREN
DETROIT MI 48224

ALFRED M LARGE MD
20867 MACK
DETROIT MI 48236

DONALD J LARGO M D
16717 WARWICK
DETROIT MI 48219

DUANE R LARKIN MD
28435 PLYMOUTH
LIVONIA MI 48150

RICHARD I LARNED MD
15208 BRINGARD
DETROIT MI 48205

EDWARD G LARSEN MD
2421 FORT ST
TRENTON MI 48183

ROBT D LARSEN MD
3800 WOODWARD AVE #614
DETROIT MI 48201

RONALD R LARSON MD
18101 OAKWOOD BLVD
DEARBORN MI 48122

BROR H LARSSON MD L
81 E KIRBY AVE
DETROIT MI 48202

ANDREW G LASICHAK MD
76 W ADAMS AVE
DETROIT MI 48226

JAMES W LASLEY MD
2058 BOOTMAKER LANE
BLOOMFIELD HILLS MI 48013

FREDK R LATIMER MD
28 W ADAMS
DETROIT MI 48226

KARL K LATTEIER MD
6145 BLUE BEECH RD
ROCHESTER MI 48063

EDWARD H LAUPPE MD L
1553 WOODWARD AVE
DETROIT MI 48226

FREDK A LAUPPE MD
1553 WOODWARD AVE
DETROIT MI 48226

ALBERT L LAURA MD
9105 HARRISON
LIVONIA MI 48150

EUGENE LAURISIN MD L
3019 W 13 MILE APT 413
ROYAL OAK MI 48073

CARL B LAUTER MD A
550 E CANFIELD
DETROIT MI 48201

ERIC W LAUTER MD
1800 TUXEDO
DETROIT MI 48206

FRANK K LAWAND MD
723 DAVID WHITNEY BLDG
DETROIT MI 48226

LOUIS F LAWRENCE MD
15901 W 9 MILE RD
SOUTHFIELD MI 48075

MORTON R LAZAR MD
20905 GREENFIELD
SOUTHFIELD MI 48075

ROBT B LEACH MD
3535 W 13 MILE RD
ROYAL OAK MI 48072

WENDELL L LEACH MD
10811 E WARREN
DETROIT MI 48214

ROBT C LEACOCK MD L
440 UNIVERSITY PL
GROSSE PTE MI 48236

LUTHER R LEADER MD L
3535 W 13 MILE RD
ROYAL OAK MI 48072

L ROSS LEAVER MD R
9508 CRESCENT BEACH DR
PIGEON MI 48755

A T LEBAMOFF MD
14801 SOUTHFIELD RD
ALLEN PARK MI 48101

MONROE S LECHNER MD
P O BOX 1919
DETROIT MI 48231

A F LECKLIDER MD R
848 BERKSHIRE RD
GROSSE PTE MI 48230

FRANK LEE MD
501 MEADOWLANE DR
DEARBORN MI 48124

HARRY E LEE MD L
13616 GRATIOT AVE
DETROIT MI 48205

PYONG TAI LEE MD
15901 W 9 MILE RD
SOUTHFIELD MI 48075

LOUIS S LEIPSITZ MD
3566 CASS AVE
DETROIT MI 48201

FORREST C LEITER MD
2355 MONROE
DEARBORN MI 48124

LOUIS S LELAND MD
867 GROSSE PTE COURT
GROSSE PTE MI 48230

SOLOMON LELAND MD
6563 GRAND RIVER
DETROIT MI 48208

CLARK F LEMLEY MD L
3011 W GRAND BLVD
DETROIT MI 48202

BRUCE K LEMON MD
20905 GREENFIELD
SOUTHFIELD MI 48075

JAMES J LENTINE MD
15831 MACK AVE
DETROIT MI 48224

WILLARD R LENZ MD
418 MORAN RD
DETROIT MI 48236

CECIL W LEPARD MD
1553 WOODWARD AVE
DETROIT MI 48226

FRED O LEPLEY MD L
19799 MACK AVE
GROSSE PTE WOODS MI 48236

FREDERICK J LEPLEY MD
19803 MACK
GROSSE PTE MI 48236

SAML I LERMAN MD
18330 PARKSIDE
DETROIT MI 48221

A MARTIN LERNER MD
1400 CHRYSLER EXP
DETROIT MI 48207

JOHN M LESESNE MD
17770 MACK AVE
DETROIT MI 48224

ARNOLD L LESHMAN MD
14219 W MCNICHOLS RD
DETROIT MI 48235

MELVIN A LESTER MD
26831 WOODWARD AVE
HUNTINGTON WDS MI 48070

JOS S LESZYNSKI MD L
8120 E JEFFERSON
DETROIT MI 48214

TRAIAN LEUCUTIA MD L
SHERATON CAD HOTEL
DETROIT MI 48226

DAVID I LEVADI MD
15635 TWELVE MILE RD
SOUTHFIELD MI 48075

FLOYD B LEVAGOOD MD
23100 CHERRY HILL RD
DEARBORN MI 48124

ARTHUR B LEVANT MD
15715 E WARREN
DETROIT MI 48224

MALCOLM L LEVENSON MD
24500 CUSTIS
SOUTHFIELD MI 48075

IRA LEVENTER MD
20211 ANN ARBOR TRAIL
DEARBORN MI 48127

WALTER G LEVICK MD
19959 VERNIER
HARPER WOODS MI 48236

DAVID M LEVIN MD A
3505 E CAMPBELL
PHOENIX AZ 85018

HERBERT G LEVIN MD
16500 NORTH PARK #101
SOUTHFIELD MI 48075

M MITCHEL LEVIN MD L
20905 GREENFIELD
SOUTHFIELD MI 48075

SAML J LEVIN MD L
3011 W GRAND BLVD
DETROIT MI 48202

EDWARD E LEVINE MD
12891 SHERWOOD
HUNTINGTON WOODS MI 48070

IRVING LEVITT MD
24535 N CAROLINA
SOUTHFIELD MI 48075

NATHAN LEVITT MD L
1007 KALES BLDG
DETROIT MI 48226

STANLEY H LEVY MD
10601 SEVEN MILE RD
DETROIT MI 48221

BENJAMIN M LEWIS MD
1401 RIVARD
DETROIT MI 48207

HARVEY Y LEWIS MD
18181 W 12 MILE RD
LATHRUP VILLAGE MI 48075

J HUGH LEWIS MD L
1543 FORD AVE
WYANDOTTE MI 48192

LEE A LEWIS MD
2730 E JEFFERSON AVE
DETROIT MI 48207

WILFRID J LEWIS MD L
10 PETERBORO ST
DETROIT MI 48201

ROBT V LIBBRECHT MD
6540 PARK AVE
ALLEN PARK MI 48101

MAX L LICHTER MD
2900 OAKWOOD BLVD
MELVINDALE MI 48127

ARTHUR G LIDDICOAT MD L
20125 FENKELL
DETROIT MI 48223

KIM K LIE MD
1408 KALES BLDG
DETROIT MI 48226

BARNARD L LIEBERMAN MD R
668 EL CENTRO LGBT KEY
SARASOTA FL 33577

JAMES J LIGHTBODY MD L
7815 E JEFFERSON
DETROIT MI 48214

GEO A LIGHTBOURN MD
3800 WOODWARD AVE #808
DETROIT MI 48201

RUDOLPH W LIGNELL MD
401 NORTHLAND MED BLDG
SOUTHFIELD MI 48075

JOSEPH A LIIOI MD
17000 W 8 MILE RD
SOUTHFIELD MI 48075

ROBERT P LILLY MD
15240 MERRIMAN RD
LIVONIA MI 48154

DAVID W LINDNER MD
3800 WOODWARD 822
DETROIT MI 48201

LEONARD S LINKNER MD
12944 LA SALLE LANE
HUNTINGTON WOODS MI 48070

HERMAN J LINN MD
1420 ST ANTOINE
DETROIT MI 48226

STANLEY L LIPINSKI MD
7540 MICHIGAN AVE
DETROIT MI 48210

EZRA LIPKIN MD L
14150 VICTORIA
OAK PARK MI 48237

CARL E LIPNIK MD
31610 PLYMOUTH RD
LIVONIA MI 48150

MORRIS J LIPNIK MD
17000 W EIGHT MILE
SOUTHFIELD MI 48075

FLOYD H LIPPA MD
1326 ST ANTOINE ST
DETROIT MI 48226

LOUIS S LIPSCHUTZ MD
2243 GOLFVIEW DR #205
TROY MI 48084

CHANNING T LIPSON MD
20101 JAMES COUZENS
DETROIT MI 48235

MADELEINE L LIPSON MD
1800 TUXEDO
DETROIT MI 48206

RAYMOND F LIPTON MD
10 PETERBORO ST
DETROIT MI 48201

JAMES W LITTLE MD
3637 FRANKLIN RD
BLOOMFIELD HILLS MI 48013

JACK A LITWIN MD
15121 W MC NICHOLS RD
DETROIT MI 48235

D J LITZENBERGER MD
2429 OAKWOOD
MELVINDALE MI 48127

BENITO C LIU MD
60 W HANCOCK
DETROIT MI 48201

CLARENCE S LIVINGOOD
345 UNIVERSITY
GROSSE PTE MI 48236

W C LIVINGSTON MD
12901 W 7 MILE RD
DETROIT MI 48235

JAMES R LLOYD MD
1515 DAV WHITNEY BLDG
DETROIT MI 48226

MOLLY TAN LO MD
SINAI HOSPITAL
DETROIT MI 48235

EDWARD C LOCKHART MD
7569 TIREMAN
DETROIT MI 48204

JAMES E LOFSTROM MD
3601 W 13 MILE RD
ROYAL OAK MI 48072

ANNIE B LOGRIPPO MD A
36 RIDGE ROAD
PLEASANT RIDGE MI 48069

CARL W LOHMANN MD
933 DAV WHITNEY BLDG
DETROIT MI 48226

BERTON L LONDON MD
18510 MEYERS
DETROIT MI 48235

JAVIER H LONDONO MD A
171 HARRISON
BOSTON MA 02111

EARL C LONG MD L
19751JAMES COUZENS HWY
DETROIT MI 48235

JOHN J LONG MD
15901 GREENFIELD AVE
DETROIT MI 48227

SALVATORE LONGO MD
468 CADIEUX
DETROIT MI 48230

JOHN L LOOMIS MD
236 VISGER RD
RIVER ROUGE MI 48218

GERALD N LOOMUS MD
4100 W MCNICHOLS
DETROIT MI 48221

REUBEN LUPATIN MD
2421 MONROE BLVD C
DEARBORN MI 48124

RODOLFO LOPEZ MD A
GRACE HOSPITAL
DETROIT MI 48201

C B P LORANGER MD
20825 MACK
DETROIT MI 48236

JOS H LORBER MD
873 LAKEWOOD AVE
DETROIT MI 48215

EDWIN H LORENTZEN MD L
11702 GRAND RIVER AVE
DETROIT MI 48204

WM S LOVAS MD
3577 FORT ST
LINCOLN PARK MI 48146

DONALD M LOVE MD
32665 UTICA
FRASER MI 48026

JAMES M LOVE MD
16565 BENTLER ST
DETROIT MI 48219

ADOLF W LOWE MD
3338 W DAVISON AVE
DETROIT MI 48238

PAUL L LOWINGER MD
951 E LAFAYETTE
DETROIT MI 48207

WM L LOWRIE MD L
2799 W GRAND BLVD
DETROIT MI 48202

ELLIOT D LUBY MD
4467 STONY RIVER DR
BIRMINGHAM MI 48010

CHARLES E LUCAS MD
DETROIT GENERAL HOSP
DETROIT MI 48226

ROBERT J LUCAS MD
771 FISHER BLDG
DETROIT MI 48202

ALFRED H F LUI MD
WAYNE CO GEN HOSPITAL
ELOISE MI 48132

JOHN G LUMPKIN JR MD
3800 WOODWARD AVE #418
DETROIT MI 48201

PAULINO R LUNA MD
10151 MICHIGAN AVE
DEARBORN MI 48126

EARL F LUTZ MD R
2920 N E 55TH ST
FT LAUDERDALE FL 33308

SHERWIN J LUTZ MD
15121 W MCNICHOLS
DETROIT MI 48235

DENIS A LUZ MD
BON SECOURS HOSPITAL
GROSSE PTE MI 48236

JOHN H LUZADRE MD
18430 MACK AVE
DETROIT MI 48236

DAVID H LYNN MD
LYNN HOSPITAL
LINCOLN PARK MI 48146

HARVEY D LYNN MD
3815 PELHAM RD
DEARBORN MI 48124

ROBT P LYTLE MD
402 NORTHLAND MED BLDG
SOUTHFIELD MI 48075

HAYWARD C MABEN JR MD
554 FISHER BLDG
DETROIT MI 48202

JOHN D MABLEY MD L
404 DAVID WHITNEY BLDG
DETROIT MI 48226

ORRIN P MAC DOUGALL MD A
18914 PINEHURST
DETROIT MI 48204

HOWARD W MACFARLANE MD L
1553 WOODWARD AVE
DETROIT MI 48226

HAROLD C MACK MD L
3800 WOODWARD #512
DETROIT MI 48201

ROBERT E MACK MD
WOMANS HOSPITAL
DETROIT MI 48201

EARLE D MAC KENZIE MD L
81 E KIRBY ST
DETROIT MI 48202

WM G MACKERSIE MD L
23237 PROVIDENCE DR
SOUTHFIELD MI 48075

CHAS W MAC LEOD MD
16345 W MC NICHOLS
DETROIT MI 48235

FRANCIS B MACMILLAN MD
1553 WOODWARD AVE
DETROIT MI 48226

JOHN J MACNEIL MD
2075 E 14 MILE RD
BIRMINGHAM MI 48008

K C MAC PHERSON MD L
8100 E JEFFERSON
DETROIT MI 48214

MALCOLM D MAC QUEEN MD L
660 WOODWARD AVE
DETROIT MI 48226

RAMON A MADRID MD
10151 MICHIGAN AVE
DEARBORN MI 48126

RALPH C MAGNELL MD
20100 W MCNICHOLS RD
DETROIT MI 48219

CLARENCE E MAGUIRE MD
1553 WOODWARD AVE
DETROIT MI 48226

BIRESH C MAHANTI MD
2300 OAK ST
WYANDOTTE MI 48192

MURRAY S MAHLIN MD
16820 GREENFIELD AVE
DETROIT MI 48235

HUGH M MAHONEY MD
1553 WOODWARD AVE
DETROIT MI 48226

FREDK P MAIBAUER MD
2934 BIDDLE AVE
WYANDOTTE MI 48192

ROSSER L MAINWARING MD
18101 OAKWOOD BLVD
DEARBORN MI 48123

EDWARD D MAIRE MD L
15224 E JEFFERSON
DETROIT MI 48230

HARRY MAISEL MD
19980 RENFREW
DETROIT MI 48221

RUTH J MAITLAND MD
MICH BELL TELEPHONE
DETROIT MI 48226

V E MAJAUSKAS MD
23738 JOY RD
DETROIT MI 48239

AHMAD J MAJZOUB MD
3334 FORT
LINCOLN PARK MI 48146

ROSE MALACH MD
8215 HALL RD
UTICA MI 48087

FRANK J MALJE MD
6033 MIDDLEBELT
GARDEN CITY MI 48135

JOHN M MALONE MD
17300 SCHAEFER RD
DETROIT MI 48235

ROBERT E MALONE MD
15101 SOUTHFIELD
ALLEN PARK MI 48101

JOHN A MALONEY MD L
670 MACCABEES BLDG
DETROIT MI 48202

PHILIP J MALONEY MD
16401 GRAND RIVER
DETROIT MI 48227

JOS H MALTZER MD
26505 JOHN R
MADISON HGHTS MI 48071

BERNARD T MAMMEL MD
14447 W SEVEN MILE RD
DETROIT MI 48235

VINCENT S MANCUSO MD L
611 S W 38TH AVE
FT LAUDERDALE FL 33312

LESLIE MANDEL MD
26750 GRAND RIVER
DETROIT MI 48240

B MANDELBAUM MD
432 E HANCOCK
DETROIT MI 48201

GERALD H MANDELL MD
SINAI HOSPITAL
DETROIT MI 48235

JACK N MANDIBERG MD
22341 W EIGHT MILE RD
DETROIT MI 48219

M MANGKORNKANOK MD A
WAYNE STATE UNIV
DETROIT MI 48207

HARI B MANKANI MD
2000 SECOND AVE
DETROIT MI 48226

ANDREW D MANN MD
20901 MOROSS
DETROIT MI 48236

MOREY H MANNING MD
950 E STATE FAIR AVE
DETROIT MI 48203

GORDON MANSON MD
HENRY FORD HOSP
DETROIT MI 48202

ALBERTO MANZOR MD
3800 WOODWARD #1202
DETROIT MI 48201

KENNETH E MAPLETOFT MD
420 MOHAWK
DEARBORN MI 48124

ANDREAS MARCOTTY MD
28035 SOUTHFIELD RD
LATHRUP VILLAGE MI 48075

EDWIN L MARCUS MD
15101 SOUTHFIELD
ALLEN PARK MI 48101

VINCENT J MARECKI MD
10326 W WARREN
DEARBORN MI 48126

RAYMOND R MARGHERIO MD A
OPHTHALMOLOGY DEPT
DETROIT GENERAL HOSP

DETROIT MI 48226

MARVIN D MARGOLIS MD
18205 PARKSIDE
DETROIT MI 48221

SAUL Z MARGULES MD
22301 GREATER MACK
ST CLAIR SHORES MI 48080

CARLETON J MARINUS MD L
1037 DAV WHITNEY BLDG
DETROIT MI 48226

JEROME MARK MD
513 DAVID WHITNEY BLDG
DETROIT MI 48226

ALEXANDER P MARKEY MD
14853 MICHIGAN AVE
DEARBORN MI 48126

FRANK R MARKEY MD
18240 FAIRWAY DR
DETROIT MI 48221

RUPERT C L MARKOE MD L
7600 JOHN R ST
DETROIT MI 48202

BEN MARKS MD
232 W GRAND RIVER AVE
DETROIT MI 48226

BERT W MARKS MD
8250 LINCOLN DR
HUNTINGTON WOODS MI 48070

ALTON R MARSH MD L
15696 WOODLAND DR
DEARBORN MI 48120

JAMES R MARSHALL MD L
14827 E JEFFERSON AVE
DETROIT MI 48215

J R MARSHALL JR MD
20160 MACK AVE
DETROIT MI 48236

J B MARTIN JR MD
449 E ELIZABETH ST
DETROIT MI 48201

LYNDLE R MARTIN MD
2000 SECOND BLVD
DETROIT MI 48226

PETER A MARTIN MD
857 FISHER BLDG
DETROIT MI 48202

WALTER MARTIN MD
13800 LIVERNOIS
DETROIT MI 48238

WILBUR C MARTIN MD
10401 W CHICAGO
DETROIT MI 48204

ALVARO MARTINEZ MD A
17200 NW 53RD AVE
OPA LOCKA FL 33054

ANTHONY MARTINEZ MD
CHRYSLER CORP
HIGHLAND PARK MI 48203

PEDRO O MARTINEZ MD L
1439 BAGLEY AVE
DETROIT MI 48216

E S MARTINOVSKY MD
NORTHVILLE STATE HOSP
NORTHVILLE MI 48167

EDGAR E MARTMER MD R
CURTIS DR RR1 BOX 62
COLOMA MI 49038

THOS B MARWIL MD
21751 W 11 MILE RD
SOUTHFIELD MI 48075

ROBERT C MARVIN MD
22362 MORLEY
DEARBORN MI 48124

T A MASCARIN MD
18101 E WARREN
DETROIT MI 48224

DONALD D MASSE MD
3040 E 7 MILE RD
DETROIT MI 48234

PERRY L MATHIS MD
3239 CLEMENTS
DETROIT MI 48238

BURTON V MATTHEWS MD
13724 W FORT ST
SOUTHGATE MI 48192

PAUL E MATTMAN MD
1500 SEMINOLE
DETROIT MI 48214

THEO M MATTSON MD
901 W GRAND BLVD
DETROIT MI 48208

EUGENE W MAUCH MD
15101 SOUTHFIELD
ALLEN PARK MI 48101

HARRY G MAUTHE MD
16859 POLLYANA DR
LIVONIA MI 48154

FREDK M MAYNARD MD
6828 PARK AVE
ALLEN PARK MI 48101

WILLIAM O MAYS MD
19737 CHEYENNE
DETROIT MI 48235

F N MAYWOOD MD
20840 VERNIER RD
HARPER WOODS MI 48236

GORDON S MC ALPINE MD L
1250 C TRAILWOOD PATH
BIRMINGHAM MI 48010

THOS J MC BRYAN MD
21420 HARPER
ST CLAIR SHORES MI 48080

LYMAN M MC BRYDE MD L
RICHARDS LANDING
ST JOSPEH ISLAND

ONTARIO CANADA

JAMES H MC CADIE MD
13700 WOODWARD AVE
HIGHLAND PARK MI 48203

MARION G MCCALL JR MD
8401 WOODWARD
DETROIT MI 48202

VIRGINIA MCCANDLESS MD
270 S MELBORN
DEARBORN MI 48124

R S MC CAUGHEY MD
3535 W 13 MILE RD
ROYAL OAK MI 48072

ROBT J MC CLELLAN MD
16345 W MCNICHOLS
DETROIT MI 48235

RACHEL MC CLELLAND MD
33026 FIVE MILE RD
LIVONIA MI 48154

JAMES J MC CLENDON MD L
8401 WOODWARD
DETROIT MI 48202

WM R MC CLURE MD L
BOX 1498
BOYNTON BEACH FL 33435

C E MCCOLE MD
HENRY FORD HOSP
DETROIT MI 48202

CHAS W MC COLL MD
2025 FORD AVENUE
WYANDOTTE MI 48192

CLARKE M MC COLL MD L
31262 HUNTLEY SQ EAST
BIRMINGHAM MI 48009

JOHN H MCCOLLOUGH MD
3800 WOODWARD AVE
DETROIT MI 48201

E BERT MC COLLUM MD
20867 MACK
DETROIT MI 48236

CAREY P MC CORD MD L
SCH OF PUBLIC HEALTH
ANN ARBOR MI 48104

COLIN C MC CORMICK MD A
24352 ROCKFORD AVE
DEARBORN MI 48124

FRANK B MCCUE MD
23290 W OUTER DRIVE
ALLEN PARK MI 48101

L E MC CULLOUGH MD
1711 DAV WHITNEY BLDG
DETROIT MI 48226

ANGUS L MC DONALD MD L
81 MEADOW LANE
GROSSE PTE MI 48236

JOHN R MC DONALD MD
HARPER HOSP
DETROIT MI 48201

WM G MC DONALD MD
15600 MICHIGAN AVE
DEARBORN MI 48126

WM G MC EVITT MD
1140 W BOSTON BLVD
DETROIT MI 48202

T MANFORD MCGEE MD
22000 GREENFIELD
OAK PARK MI 48237

KENNETH D MCGINNIS MD
6071 W OUTER DR
DETROIT MI 48235

N D MC GLAUGHLIN MD
2312 BIDDLE AVE
WYANDOTTE MI 48192

JOS M MC GOUGH MD
18211 W TWELVE MILE
LATHRUP VILLAGE MI 48075

JOHN F MC GUIRE MD
3815 PELHAM
DEARBORN MI 48124

JOHN T MC HENRY MD
DEPT OF NEUROLOGY
HARPER HOSP
3825 BRUSH AVE
DETROIT MI 48201

C W MC INTOSH MD
8339 MACK AVE
DETROIT MI 48214

ROBT D MC INTOSH MD
21390 E RIVER RD
GROSSE ILE MI 48138

WM B MC INTYRE MD
20901 MOROSS RD
DETROIT MI 48236

G THOS MC KEAN MD
1553 WOODWARD AVE
DETROIT MI 48226

GEO E MC KEEVER MD
5237 OAKMAN BLVD
DEARBORN MI 48126

CHAS J MC KENNA MD R
1295 SUNNINGDALE
GROSSE POINTE MI 48236

ROBT E MCKNIGHT MD
15901 W 9 MILE RD
SOUTHFIELD MI 48075

HARRIET I E MC LANE MD L
1367 NICOLET PLACE
DETROIT MI 48207

JAMES T MCLAUGHLIN MD
WYANDOTTE GEN HOSP
WYANDOTTE MI 48192

JASPER E MCLAURIN MD
5050 JOY RD
DETROIT MI 48204

BRITA R MC LEAN MD
1365 CASS
DETROIT MI 48226

DON W MC LEAN MD L
1066 FISHER BLDG
DETROIT MI 48202

DONALD C MC LEAN M D
459 FISHER BLDG
DETROIT MI 48202

I WM MCLEAN JR MD
PARKE DAVIS & CO
JOSEPH CAMPAU @ RIVER

DETROIT MI 48232

THOMAS V MCMANAMON MD
23470 MEADOW PARK
DETROIT MI 48239

ROGER F MC NEILL MD
63 KERCHEVAL
GROSSE PTE MI 48236

L J MCNICHOL MD
18424 W MCNICHOLS RD
DETROIT MI 48219

RODERICK T MC PHEE MD
14628 E 7 MILE RD
DETROIT MI 48205

MARK R MC QUIGGAN MD L
700 SEWARD APT 715
DETROIT MI 48202

JOSEPH F MEARA MD
DETROIT MEM HOSP
DETROIT MI 48226

MAJ G L MEDINA MC
382-549-932
DARNALL ARMY HOSP
ORTHOPAEDIC DEPT
FORT HOOD TEXAS 76544

GIL H MEDIODIA MD M
22912 CANTERBURY
ST CLAIR SHORES MI 48080

STUART F MEEK MD
14981 TWELVE MILE RD
WARREN MI 48093

R J MEHDIABADI MD A
WAYNE STATE UNIVERSITY
DETROIT MI 48207

L W MELANDER JR MD
1229 DAVID WHITNEY BDG
DETROIT MI 48226

HYMAN S MELLEN MD
16800 GREENFIELD
DETROIT MI 48235

RAYMOND C MELLINGER MD
959 PEMBERTON
GROSSE PTE MI 48236

MAXIM P MELNIK MD
3011 W GRAND BLVD
DETROIT MI 48202

NESTOR MELNYCZUK MD
19600 W WARREN
DETROIT MI 48228

RICHARD MENCZER MD
29081 DEQUINDRE
MADISON HEIGHTS MI 48071

HERBERT MENDELSON MD
15200 NORTHFIELD
OAK PARK MI 48237

A N MENDELSSOHN MD
3535 W 13 MILE RD
ROYAL OAK MI 48072

R J MENDELSSOHN MD
8100 E JEFFERSON AVE
DETROIT MI 48214

EDGAR V MENDIANS MD
9486 BEACONSFIELD
DETROIT MI 48224

SAMUEL MENDOZA MD
14515 FORD RD
DEARBORN MI 48126

NORMAN J MENTON M D
15300 W MCNICHOLS
DETROIT MI 48235

RODOLFO S MERCADER MD
30900 FORD RD
GARDEN CITY MI 48135

CHAS C MERKEL MD L
85 KERCHEVAL AVE
GROSSE PTE FARMS MI 48236

KARL MERKLE M D
530 N TELEGRAPH
DEARBORN MI 48128

C R MERRILL JR MD
1951 MONROE
DEARBORN MI 48124

EARL G MERRITT MD L
3800 WOODWARD AVE
DETROIT MI 48201

JOHN S METES MD
62 WEBBER PL
GROSSE PTE SHORES MI 48236

EUGENE MEYER M D
15830 FORT ST
SOUTHGATE MI 48192

KENNETH R MEYER MD
OAKWOOD HOSP
DEARBORN MI 48124

MARJORIE P MEYERS M D
3790 WOODWARD
DETROIT MI 48201

MAURICE P MEYERS MD
23195 RIVERSIDE DR
SOUTHFIELD MI 48075

CLEON M MICHAEL MD
32300 SCHOOLCRAFT
LIVONIA MI 48150

MICHAEL J MICHAEL MD
15901 W 9 MILE RD #400
SOUTHFIELD MI 48075

ELWIN W MIDGLEY MD
60 W HANCOCK
DETROIT MI 48201

DAVID MIGDOLL MD
15361 PLYMOUTH RD
DETROIT MI 48227

BENJAMIN MIHAY M D
2021 MONROE
DEARBORN MI 48124

W B MIKESELL JR MD
23611 GODDARD
TAYLOR MI 48180

GEORGE MIKHAIL MD
HENRY FORD HOSP
DETROIT MI 48202

LEWIS H MILBURN MD
3800 WOODWARD AVE
DETROIT MI 48201

VYTAUTAS MILERIS MD
2730 E JEFFERSON AVE
DETROIT MI 48207

HUGH H MILEY MD
WAYNE COUNTY GEN HOSP
ELOISE MI 48132

GLENN E MILLARD MD
958 FISHER BLDG
DETROIT MI 48202

ANTONINA MILLER MD
16989 FARMINGTON
LIVONIA MI 48154

DANL H MILLER MD
23100 CHERRY HILL
DEARBORN MI 48124

ELMER B MILLER MD
7 JOHN GLENN PLACE
HIGHLAND PARK MI 48203

JACOB J MILLER MD
20131 JAMES COUZENS
DETROIT MI 48235

J MARTIN MILLER MD
2799 W GRAND BLVD
DETROIT MI 48202

KARL L MILLER MD
1553 WOODWARD AVE
DETROIT MI 48226

MYRON H MILLER MD L
27330 SOUTHFIELD RD
LATHRUP VILLAGE MI 48075

OSCAR W MILLER MD
FLEETWOOD PLT FBD GMC
DETROIT MI 48209

THOS H MILLER MD L
3031 IROQUOIS AVE
DETROIT MI 48214

WM E MILLER MD L
361 MERTON RD
DETROIT MI 48203

WILLIAM J MILLER M D
5649 INKSTER RD
GARDEN CITY MI 48135

CLINTON C MILLS MD L
13938 SARASOTA
DETROIT MI 48239

GEO R MILLS MD
8209 ALLEN ROAD
ALLEN PARK MI 48101

SAMUEL B MILTON MD
26560 W OUTER DR
LINCOLN PARK MI 48146

MORRIS J MINTZ MD
17563 GREENFIELD
DETROIT MI 48235

MORTEZA MINUI MD
1576 KIRKWAY DR
BLOOMFIELD HILLS MI 48013

JOHN MINYE MD
6014 WEST FORT ST
DETROIT MI 48209

SOPHIE MISHELEVICH MD L
4651 E NINE MILE RD
WARREN MI 48091

MARTYNA MISKINIS MD
393 W GRAND BLVD
DETROIT MI 48216

EDWARD MISSAVAGE JR MD
WAYNE CO GENL HOSP
ELOISE MI 48132

A W MITCHELL M D
12000 VISGER
DETROIT MI 48217

C LESLIE MITCHELL MD R
HENRY FORD HOSP
DETROIT MI 48202

DARNELL P MITCHELL MD
8401 WOODWARD AVE
DETROIT MI 48202

ROY A MITCHELL MD
1992 ARDMORE RD
TRENTON MI 48183

ROBT C MOEHLIG MD L
964 FISHER BLDG
DETROIT MI 48202

KAMRAN S MOGHISSI MD
3800 WOODWARD AVE
502 PROFESSIONAL PLAZA
DETROIT MI 48201

GEO MOGILL MD
26321 WOODWARD
HUNTINGTON WOODS MI 48070

JAHANGIR MOHTADI MD
302 W MAIN ST
NORTHVILLE MI 48167

VASIL P MOISIDES MD L
28 W ADAMS AVE
DETROIT MI 48226

HOWARD MOLITZ MD A
OPHTHALMOLOGY DEPT
DETROIT GENERAL HOSP
DETROIT MI 48226

CLARENCE D MOLL MD L
2368 HARRISON DR
DUNEDIN FL 33528

STEPHEN K MOLNAR MD
4525 S TELEGRAPH RD
DEARBORN MI 48125

BOXIDAR MOMCILOVICH MD
2241 HURON RIVER DR
ROCKWOOD MI 48173

E MONGE-ST LAURENT MD
23607 FARMINGTON RD
FARMINGTON MI 48024

ROBT C MONSON MD
17520 CHESTER
DETROIT MI 48224

JOS R MONTANTE MD
3040 MIDDLEBELT RD
ORCHARD LAKE MI 48033

MILTON MONTENEGRO MD
16633 GOLFVIEW
LIVONIA MI 48154

WM C MONTGOMERY MD
6071 W OUTER DR
DETROIT MI 48235

RAYMOND W MONTO MD
HENRY FORD HOSP
DETROIT MI 48202

JOHN W MOORE JR MD
8251 W 8 MILE RD
DETROIT MI 48221

THOMAS F MOORE MD A
2921 BAMLET ROAD
ROYAL OAK MI 48073

WARREN R MOORE MD
17800 E 8 MILE RD
DETROIT MI 48236

WESLEY P MOORE MD
HENRY FORD HOSPITAL
DETROIT MI 48202

COLEMAN MOPPER MD
14633 E SEVEN MILE RD
DETROIT MI 48205

AZORIDES R MORALES MD
HENRY FORD HOSP
DETROIT MI 48202

MIRIAM V MORALES MD
915 COOK RD
GROSSE PTE WOODS MI 48236

FRANK J MORAN MD
16311 MIDDLEBELT
LIVONIA MI 48154

DONALD N MORGAN MD
326 EASTLAND CENTER
PROFESSIONAL BLDG
HARPER WOODS MI 48225

GEO J MORIARTY MD
3011 W GRAND BLVD
DETROIT MI 48202

YOSHIKAZU MORITA MD
3535 W 13 MILE RD
ROYAL OAK MI 48072

ARTHUR R MORLEY MD
9645 ISLAND DR
GROSSE ILE MI 48138

GEORGE M MORLEY MD
20211 ANN ARBOR TRAIL
DEARBORN HEIGHTS MI 48127

HAROLD V MORLEY MD
970 FISHER BLDG
DETROIT MI 48202

JAMES A MORLEY MD L
4200 WHITE BIRCH DR
ORCHARD LAKE MI 48033

THOMAS S MORLEY MD
4160 JOHN R ST
DETROIT MI 48201

SHEFFICK J MOROUN MD
675 PARKER
DETROIT MI 48214

HAROLD L MORRIS MD L
26111 MEADOWBROOK RD
NOVI MI 48050

MARVA J MORRIS MD
12632 DEXTER
DETROIT MI 48238

GEORGE W MORRISON MD
2033 PARK
DETROIT MI 48226

WILLIAM H MORSE MD
26711 SOUTHFIELD
LATHRUP VILLAGE MI 48075

DAVID G MORTON MD
19445 PLYMOUTH
DETROIT MI 48228

FREDK L MOSELEY MD
2561 S SCHAEFER
DETROIT MI 48217

PETER F MOSER MD
26082 E HURON RIVER DR
FLAT ROCK MI 48134

JOHN W MOSES MD
MT CARMEL MERCY HOSP
6071 OUTER DR WEST
DETROIT MI 48235

NATHAN H MOSS M D
2847 TRUMBULL
DETROIT MI 48216

NORMAN D MOSS MD
29519 MEADOWLANE DR
SOUTHFIELD MI 48075

SELMA S MOSS MD
20905 GREENFIELD
SOUTHFIELD MI 48075

CARLIN P MOTT MD L
2395 W GRAND BLVD
DETROIT MI 48208

JOHN W MOYNIHAN MD
2841 MONROE BLVD
DEARBORN MI 48124

HERSCHEL E MOZEN MD
17550 W 12 MILE RD
SOUTHFIELD MI 48075

JOHN MUCASEY M D
22341 W 8 MILE RD
DETROIT MI 48219

HECTOR L MULERO MD
15101 SOUTHFIELD RD
ALLEN PARK MI 48101

JOS R MULLEN MD
19003 ECORSE RD
ALLEN PARK MI 48101

RENE A MUNECAS MD
1800 TUXEDO
DETROIT MI 48206

HENRY T MUNSON MD
7815 E JEFFERSON
DETROIT MI 48214

SCIPIO G MURPHY MD L
8401 WOODWARD AVE
DETROIT MI 48202

GORDON M MURRAY MD
9901 WHITTIER
DETROIT MI 48224

IAN H L MURRAY MD
18161 W 12 MILE RD
LATHRUP VILLAGE MI 48075

PATRICK MURRAY MD
261 MACK AVE
DETROIT MI 48201

ROBT J MURRAY MD
3700 WEST RD
TRENTON MI 48183

PAUL H MUSKE MD
13244 W WARREN
DEARBORN MI 48126

KADRI K MUTLU MD
35337 WEST WARREN
WESTLAND MI 48184

JAROSLAW MUZ MD A
GRACE HOSPITAL
DETROIT MI 48201

DANL W MYERS MD
2243 GOLFVIEW DR #106
TROY MICHIGAN 48084

STEVEN A MYERS MD
951 E LAFAYETTE
DETROIT MI 48207

D P NACHAZEL JR MD
3800 WOODWARD AVE
DETROIT MI 48201

RUSSELL NAHIGIAN MD
17371 ANNCHESTER AVE
DETROIT MI 48219

ANTOINE NAHOUM MD
1030 KENSINGTON
DETROIT MI 48230

EDWARD B NASH MD
4075 INKSTER RD
INKSTER MI 48141

JOSEPH H NAUD MD
18241 GREENFIELD RD
DETROIT MI 48235

ALBERT G NAULT JR MD
18101 E WARREN
DETROIT MI 48224

DOMINADOR G NAVALTA MD
14868 REECK ST
SOUTHGATE MI 48192

CORNELIUS A NAVORI MD
3516 FORT STREET
LINCOLN PARK MI 48146

ARTHUR H NAYLOR MD L
2220 N TIPSICO LK RD
MILFORD MI 48042

S G NAZARENO MD
18144 MULBERRY
RIVERVIEW MI 48192

WALTER G NEEB MD
16840 E WARREN ST
DETROIT MI 48224

JOHN M NEHRA MD
17900 E 8 MILE RD #412
GROSSE POINTE MI 48236

EDWIN J NEILL MD
5026 BEDFORD
DETROIT MI 48224

DARWIN M NELSON MD
63 RIDGE RD
DETROIT MI 48236

HARRY M NELSON MD L
1800 LULA LAKE RD
LOOKOUT MOUNTAIN TN 37350

NORMAN A NELSON MD
WAYNE CO GEN HOSP
ELOISE MI 48132

VICTOR E NELSON MD
3025 CROOKS RD
ROYAL OAK MI 48073

WARREN S NESBIT MD
24382 ROSS CT
DETROIT MI 48239

PAUL N NEUFELD MD
17000 W EIGHT MILE RD
SOUTHFIELD MI 48075

ERNEST NEWMAN MD R
17371 EVERGREEN ST
DETROIT MI 48219

GEO F NEWMAN MD
2012 MONROE BLVD
DEARBORN MI 48124

MAX K NEWMAN MD
21701 W 11 MILE RD
SOUTHFIELD MI 48075

KENNETH NEWTON MD
11841 SUSAN AVE
WARREN MI 48093

AHMAD NEZAFATI-AZAR MD
20340 HARPER
HARPER WOODS MI 48236

WALLACE NICHOLS JR MD
2387 ASHBY
TRENTON MI 48183

WARREN O NICKEL MD
861 MONROE
DEARBORN MI 48124

ALBERT W NICKELS MD
3535 W 13 MILE RD
ROYAL OAK MI 48072

AAGE E NIELSEN MD
3790 WOODWARD
DETROIT MI 48201

DONALD R NIELSEN MD
26339 WOODWARD AVE
HUNTINGTON WOODS MI 48070

NORMAN D NIGRO MD
3800 WOODWARD #508
DETROIT MI 48201

M H NILFOROUSHAN MD
25210 GRAND RIVER
DETROIT MI 48240

JOHN B NILL MD L
15001 E WARREN
DETROIT MI 48224

LUIS A NINO MD
25638 CHAPELWEIGH DR
FARMINGTON MI 48024

WM C NOBLE MD
4045 W JEFFERSON
ECORSE MI 48229

BERNARD E NOLAN MD
5460 SCHAEFER RD
DEARBORN MI 48126

WILFRED S H NOLTING MD
15850 E WARREN AVE
DETROIT MI 48224

DAVID C NORTHCROSS MD
2929 W BOSTON BLVD
DETROIT MI 48206

ARTHUR B NORTON MD L
18615 MUIRLAND
DETROIT MI 48221

MARTIN L NORTON MD
17125 MT VERNON BLVD
SOUTHFIELD MI 48075

WM C NOSHAY MD
2799 W GRAND BLVD
DETROIT MI 48202

ROBT L NOVY MD L
2910 IROQUOIS
DETROIT MI 48214

KENNETH M NOWICKI MD
HARPER HOSPITAL
DETROIT MI 48201

P F NOWOSIELSKI MD
1305 BERKSHIRE
GROSSE PTE PARK MI 48230

C NWOKEDI MD
12000 VISGER RD
DETROIT MI 48217

JAN NYBOER MD
HARPER HOSPITAL
DETROIT MI 48201

VICTOR J NYBOER MD
261 MACK BLVD
DETROIT MI 48201

LEON S OBUSHKEVICH MD
5460 SCHAEFER RD
DEARBORN MI 48124

LONIE B OCDOL MD
1449 DAV WHITNEY BLDG
DETROIT MI 48226

KATHERYN L O CONNOR MD
17711 SCHOOLCRAFT
DETROIT MI 48227

DAYTON H O DONNELL MD
22000 GREENFIELD
DETROIT MI 48237

KEVIN T O DONNELL MD
15901 W 9 MILE RD #514
SOUTHFIELD MI 48075

EDWARD M OETTING M D
1041 WHITTIER
GROSSE PTE MI 48236

GILBERT M O GAWA MD
HENRY FORD HOSP
DETROIT MI 48202

GALEN B OHMART MD L
8721 E JEFFERSON AVE
DETROIT MI 48214

JULIUS M OHORODNIK MD
BON SECOURS HOSPITAL
DETROIT MI 48230

MILTON H OKUN MD
SCARBOROUGH MANOR #307
SCARBOROUGH N Y 10510

JOSEPH R OLDFORD MD
17000 W 8 MILE RD
SOUTHFIELD MI 48075

STANLEY OLEJNICZAK MD
WAYNE COUNTY GEN HOSP
ELOISE MI 48132

ALEX OLEN MD
13100 HARPER AVE
DETROIT MI 48213

FRANCIS P O LINN MD
1055 FISHER BLDG
DETROIT MI 48202

GEO S OLMSTED MD
27305 SOUTHFIELD RD
LATHRUP VILLAGE MI 48075

AVIS M OLSON M D
MT CARMEL MERCY HOSP
DETROIT MI 48235

DONALD T OLSON MD
17701 W MCNICHOLS RD
DETROIT MI 48235

GEORGE P OLSON MD
7900 JOSEPH CAMPAU
HAMTRAMCK MI 48212

JAMES A OLSON MD
17000 WEST 8 MILE RD
SOUTHFIELD MI 48075

GARY R O NEIL MD
DETROIT MEMORIAL HOSP
DETROIT MI 48226

JOS M OPPENHEIM MD
24091 DANTE
OAK PARK MI 48237

RICHARD S OPPENHEIM MD A
KRESGE EYE INSTITUTE
690 MULLETT ST
DETROIT MI 48226

HASAN Y ORGE MD A
951 E LAFAYETTE
DETROIT MI 48207

ROBT S ORMOND MD
HURLEY HOSPITAL
FLINT MI 48502

RANDALL M O ROURKE MD L
8465 KENNEDY CIRCLE
WARREN MI 48093

ARMANDO ORTIZ MD
15901 W 9 MILE RD #200
SOUTHFIELD MI 48075

EDUARDO ORTIZ MD A
HENRY FORD HOSPITAL
DETROIT MI 48202

EUGENE A OSIUS MD L
901 DAV WHITNEY BLDG
DETROIT MI 48226

ARTHUR Z OSTROWSKI MD
610 NORTHLAND MED BLDG
SOUTHFIELD MI 48075

EUGENE A OTLEWSKI MD
15901 W 9 MILE RD
SOUTHFIELD MI 48075

JOHN P OTTAWAY MD
18226 MACK AVE
GROSSE PTE FARMS MI 48236

DONALD OTTO MD
DET MEMORIAL HOSPITAL
DETROIT MI 48226

CLARENCE I OWEN MD L
2689 DUPONT
JACKSONVILLE FL 32217

S S PADILLA JR MD
305 S DELSEA
DEPTFORD N J 08096

ARTEMIO E PACQUING MD
25219 GRAND RIVER
DETROIT MI 48240

ANTHONY C PAGEDAS MD
5705 S 104TH ST
HALES CORNERS WIS 53130

ALICE E PALMER MD
810 DAV WHITNEY BLDG
DETROIT MI 48226

MILTON R PALMER MD
3800 WOODWARD AVE #218
DETROIT MI 48201

PETER PALMER MD
13479 NORTHLINE
SOUTHGATE MI 48192

I J PALMISANO MD
32300 SCHOOLCRAFT
LIVONIA MI 48150

TAMARA PANCZAK MD
PLYMOUTH STATE HOSP
NORTHVILLE MI 48167

STEPHEN M PANIC MD
28091 DEQUINDRE
MADISON HEIGHTS MI 48071

NANA N PANTOS MD
17800 E 8 MILE RD
DETROIT MI 48236

THEO G PANTOS MD
1536 DAV WHITNEY BLDG
DETROIT MI 48226

HELEN A PAPAIOANOU MD
20361 MACK AVE
DETROIT MI 48236

JOSE M PAREJO MD
4342 W VERNOR
DETROIT MI 48209

BENJ R PARKER MD
19149 W SEVEN MILE RD
DETROIT MI 48219

BRUCE R PARKER MD A
STANFORD UNIV MED CTR
DEPT OF RADIOLOGY

STANFORD CALIF 94304

JOHN W PARNELL MD
21 WHITCOMB DR
GROSSE PTE FARMS MI 48236

ROBT W PARR MD A
109 CRESTWOOD LANE
LARGO FL 33540

BENJAMIN A PASSOS MD
P O BOX 1266A
DETROIT MI 48232

MELVIN K PASTORIUS MD
22835 WILSON
DEARBORN MI 48128

ROY B PATTON MD
HENRY FORD HOSP
DETROIT MI 48202

LLOYD J PAUL MD
19321 GREENFIELD
DETROIT MI 48235

JEROME I PAWLOWSKI MD L
2009 E GRAND BLVD
DETROIT MI 48211

WALTER A PAYNE JR MD
283 HILLCREST
GROSSE POINTE MI 48236

HARRY A PAYSNER MD L
13105 IXORA COURT
NORTH MIAMI FL 33161

ARTHUR J PEARCE MD
26491 CAROL
FRANKLIN VILLAGE MI 48025

EDWIN T PEARCE JR MD
14411 E JEFFERSON
DETROIT MI 48215

JACK PEARLMAN MD
25860 CONCORD
HUNTINGTON WOODS MI 48070

HARRY A PEARSE MD L
17000 W EIGHT MILE
SOUTHFIELD MI 48075

HERBERT E PEDERSEN MD
3815 PELHAM RD
DEARBORN MI 48124

GEO F PEGGS MD
5419 LIVERNOIS AVE
DETROIT MI 48210

LUZVIMINDA PENALOZA MD
CHILDRENS HOSPITAL
DETROIT MI 48202

GEO V PENDY MD
1001 DAV WHITNEY BLDG
DETROIT MI 48226

JOHN M PENDY MD
1001 DAVID WHITNEY BL
DETROIT MI 48226

DAVID A PENNER MD
18530 GRAND RIVER
DETROIT MI 48223

MEYER PENSLER MD
10151 MICHIGAN AVE
DEARBORN MI 48126

DONALD F PERCY MD
15901 GREENFIELD AVE
DETROIT MI 48227

GRACE M PERDUE MD R
3011 W GRAND BLVD
DETROIT MI 48202

JOSE L PEREZ MD
19720 REVERE ST
DETROIT MI 48234

CARLOS PEREZ-BORJA MD
27643 SCHOENHERR
WARREN MI 48093

RENE PEREZ-TERAN MD
13326 SHERWOOD
HUNTINGTON WOODS MI 48070

CLINTON J PERINI MD A
WAYNE STATE UNIVERSITY
DETROIT MI 48207

FRANK S PERKIN MD
3011 W GRAND BLVD
DETROIT MI 48202

HYMAN L PERLIS MD L
10 PETERBORO
DETROIT MI 48201

MARVIN S PERLIS M D
1030 FISHER BLDG
DETROIT MI 48202

HAROLD PERRY MD
SINAI HOSP
DETROIT MI 48235

JOSEPH H PERRY MD
259 LEWISTON RD
GROSSE PTE MI 48236

CLAUS PETERMANN MD
20927 KELLY RD
E DETROIT MI 48021

WM R PETERS MD
670 PEACH TREE
GROSSE PTE MI 48236

GUSTAV PETERSON MD
FISHER BODY WILLOW RUN
YPSILANTI MI 48197

ROBERT A PETERSON MD
18700 MEYERS RD
DETROIT MI 48235

RONALD D PETERSON MD
FORD MOTOR CO
DEARBORN MI 48121

SAMUEL C PETIX MD
19207 SCHAEFER
DETROIT MI 48235

EDWARD A PETOSKEY MD
5656 W FORT
DETROIT MI 48209

THOS J PETRICK MD
15101 SOUTHFIELD
ALLEN PARK MI 48101

A J PETRIDES MD
28200 W SEVEN MILE RD
LIVONIA MI 48152

MARIO A PETRINI M D
1080 FISHER BLDG
DETROIT MI 48202

LOUIS A PETRUCCO MD
14044 W MCNICHOLS RD
DETROIT MI 48235

THOS A PETTY MD
17300 E JEFFERSON AVE
GROSSE PTE MI 48236

ARTHUR JOHN PETZ MD
36000 FIVE MILE RD
LIVONIA MI 48154

THOMAS J PETZ MD
605 DAV WHITNEY BLDG
DETROIT MI 48226

PHILIP S PEVEN MD
18709 MEYERS RD
DETROIT MI 48235

BURTON E PHILLIPS MD
5050 JOY RD
DETROIT MI 48204

JOS D PICARD MD
5237 OAKMAN BLVD
DEARBORN MI 48126

LOUISA I PICCONE MD
17700 W WARREN
DETROIT MI 48228

J WALTON PICHETTE MD
6650 GREENFIELD RD
DEARBORN MI 48126

ORLANDO W PICKARD MD L
4676 BERKSHIRE RD
DETROIT MI 48224

SOL D PICKARD MD
HENRY FORD HOSPITAL
DETROIT MI 48202

L M PICKERING MD
13479 NORTHLINE
SOUTHGATE MI 48192

GEORGE E PICKETT MD
316 CITY COUNTY BLDG
DETROIT MI 48226

JAMES M PIERCE JR MD
3800 WOODWARD AVE
DETROIT MI 48201

A W PIETRA MD L
1176 BISHOP
GROSSE POINTE MI 48230

LEONARD R PIGGOTT MD
951 E LAFAYETTE
DETROIT MI 48207

JOHN T PILIGIAN MD
3825 BRUSH ST
DETROIT MI 48201

JAMES F PINGEL MD
998 NORFOLK
BIRMINGHAM MI 48009

RALPH H PINO MD L
31841 KINGSWOOD SQ
FARMINGTON MI 48024

RALPH R PIPER MD L
1495 MC KINSTRY
DETROIT MI 48209

JOHN E PITTMAN MD L
1553 WOODWARD AVE
DETROIT MI 48226

CAROL K PLATZ MD
20631 BALFOUR
HARPER WOODS MI 48225

HAROLD PLISKOW MD
15901 W 9 MILE RD #202
SOUTHFIELD MI 48075

HAROLD PLOTNICK M D
18654 MUIRLAND
DETROIT MI 48221

EUGENE I PLOUS MD
569 FISHER BLDG
DETROIT MI 48202

HAROLD M PODOLSKY MD
3755 FORT
LINCOLN PARK MI 48146

A POGREBNIAK MD
25210 GRAND RIVER
DETROIT MI 48240

SENTA V POIM MD
1069 FISHER BLDG
DETROIT MI 48202

CHAS P POLENTZ MD
31815 SOUTHFIELD
BIRMINGHAM MI 48009

JOHN E POLK MD
8721 12TH ST
DETROIT MI 48206

JEROME L POLLACK MD
14551 SOUTHFIELD
ALLEN PARK MI 48101

JOHN J POLLACK MD
15901 W 9 MILE RD
SOUTHFIELD MI 48075

R J POLLARD MD
GRACE HOSP
DETROIT MI 48201

LOUIS S POLLENS MD
15421 W 9 MILE RD
OAK PARK MI 48237

CLEMENT J POLLINA MD
21420 HARPER
ST CLAIR SHORES MI 48080

JOS L PONKA MD
2799 W GRAND BLVD
DETROIT MI 48202

WALTER D POOL MD
20901 MOROSS RD
DETROIT MI 48236

KEO POOPAT MD A
WAYNE STATE UNIV
DETROIT MI 48207

GERALD POPE MD
HENRY FORD HOSP
DETROIT MI 48202

CHAS A PORRETTA MD
507 NORTHLAND MED BLDG
SOUTHFIELD MI 48075

GEORGE F PORRETTA MD
15901 W NINE MILE RD
SOUTHFIELD MI 48075

FREDK G PORTER MD
29590 FIVE MILE
LIVONIA MI 48154

HARRY PORTNOY MD
24710 SUSSEX AVE
DETROIT MI 48237

JOS L POSCH MD
1408 KALES BLDG
DETROIT MI 48226

IRVING POSNER MD
18111 MUIRLAND AVE
DETROIT MI 48235

ELIHUE B POTTS MD
7404 DEXTER
DETROIT MI 48206

JOSEPH T POWASER MD
26304 WILSON DR
DEARBORN HEIGHTS MI 48127

LAWRENCE POWER MD
1400 CHRYSLER EXPWY
DETROIT MI 48207

JOHN R PRACHER MD
3815 PELHAM RD
DEARBORN MI 48124

ANANDA S PRASAD MD
WAYNE STATE UNIVERSITY
DETROIT MI 48207

PREM S PRASAD MD
41001 W 7 MILE RD
NORTHVILLE MI 48167

JEAN P PRATT MD L
2608 N E 21ST COURT
FT LAUDERDALE FL 33305

LAWRENCE A PRATT MD A
US AID PH E APO
SAN FRANCISCO CA 96243

RUTH E PRESTON MD
3011 W GRAND BLVD
DETROIT MI 48202

A HAZEN PRICE MD L
18605 BIRCHCREST AVE
DETROIT MI 48221

ALVIN E PRICE MD L
1553 WOODWARD AVE
DETROIT MI 48226

SCOTT K PRICE MD
OAKWOOD HOSP
DEARBORN MI 48124

ROBT J PRIEST MD
HENRY FORD HOSP
DETROIT MI 48202

ADDISON E PRINCE MD
8942 DEXTER
DETROIT MI 48206

EDWARD J PRISBE MD
16603 PLYMOUTH RD
DETROIT MI 48227

JULIEN PRIVER MD
6741 W OUTER DR
DETROIT MI 48235

A B PROCAILO MD
6033 MIDDLEBELT RD
GARDEN CITY MI 48135

J LAURENCE PROCTOR MD A
5935 MIDDLESEX
DEARBORN MI 48126

LEONARD R PROCTOR MD
950 E 59TH ST
CHICAGO ILL 60650

LORNE D PROCTOR MD
HENRY FORD HOSP
DETROIT MI 48202

FRANK P PROKOP MD
12740 S MARROW ST
DEARBORN MI 48126

V PROKOPOWYCZ MD
19666 CONANT
DETROIT MI 48234

RUSSEL F PROUD MD
26151 HURON RIVER DR
FLAT ROCK MI 48134

A MICHAEL PRUS MD
4160 JOHN R STREET
DETROIT MI 48201

SIDNEY PRYSTOWSKY MD
1800 TUXEDO
DETROIT MI 48206

THOM J PRZYBYLSKI MD
770 FISHER BLDG
DETROIT MI 48202

ANDRE PUGEL MD
VET ADMIN HOSP
ALLEN PARK MI 48101

JOSEPHINE PUGEL MD
918 HOLLYWOOD
GROSSE PTE WOODS MI 48236

HOWARD C PUGH MD
1553 WOODWARD AVE
DETROIT MI 48226

ANGELO PUGLIESI MD
21811 KELLY
EAST DETROIT MI 48021

BENEDETTO PUGLIESI MD L
21811 KELLY RD
EAST DETROIT MI 48021

FRANK H PURCELL MD L
869 EDGEMONT PARK
DETROIT MI 48230

PRITPAL S PURI MD
WAYNE STATE UNIV
DETROIT MI 48207

HENRY E PURO M D
1733 TRENTON DR
TRENTON MI 48183

STEWART E PURSEL MD
1016 PROF PLAZA
DETROIT MI 48201

W L PURVES M D
17595 PARKSIDE
DETROIT MI 48221

RICHARD G QUEVY MD
24425 HOOVER
WARREN MI 48089

EUGENE H QUIGLEY MD
635 N GULLEY
DEARBORN HGHTS MI 48127

WM G QUIGLEY MD A
16210 W NINE MILE RD
SOUTHFIELD MI 48075

EDWARD L QUINN MD
1141 GOLFVIEW
BIRMINGHAM MI 48009

RAFAEL E QUINONES MD
17200 E WARREN
DETROIT MI 48224

MOHAMMED RABBANI MD
1400 CHRYSLER EXPWY
DETROIT MI 48207

BELLA M RABINOVITCH MD
26590 WELLINGTON DR
FRANKLIN MI 48025

NAIM M RABY MD
15830 FORT
SOUTHGATE MI 48192

N RACHMANINOFF MD
HARPER HOSP
DETROIT MI 48201

PAUL D RADGENS MD
751 S MILITARY
DEARBORN MI 48124

KIANOOSH RADSAN MD
15101 SOUTHFIELD
ALLEN PARK MI 48101

SAMIR RAGHEB MD
4407 ROEMER
DEARBORN MI 48126

LAMBERT P RAHM MD L
14411 E JEFFERSON AVE
DETROIT MI 48215

FRANK P RAIFORD 111 MD
10326 W 7 MILE RD
DETROIT MI 48221

JAMES A RAIKES MD
6309 CHARLEVOIX
DETROIT MI 48207

CHARLES O RAMIN MD
DETROIT GENERAL HOSP
DETROIT MI 48226

BENJAMIN R RAMOS MD
17051 MT VERNON BLVD
SOUTHFIELD MI 48075

ROBT H RAMSEY MD
3815 PELHAM RD
DEARBORN MI 48124

DAVID S RANDALL MD
3955 FORT ST
LINCOLN PARK MI 48146

BERNARD RAPOPORT MD
1800 TUXEDO
DETROIT MI 48206

SEYMOUR L RAPP MD
22711 WREXFORD DR
SOUTHFIELD MI 48075

CARL A RASIMAS MD
1210 KALES BLDG
DETROIT MI 48226

HERBERT A RASKIN MD
20100 W 10 1/2 MILE RD
SOUTHFIELD MI 48075

PETER B RASTELLO MD R
3295 WEST SHORE DR
ORCHARD LAKE MI 48033

WM H RATTNER MD
954 FISHER BLDG
DETROIT MI 48202

FREDK W RAU MD
2730 E JEFFERSON
DETROIT MI 48207

CLARA RAVEN MD
8114 ST PAUL
DETROIT MI 48214

HERBERT A RAVIN MD
6767 W OUTER DR
DETROIT MI 48235

LOUIS A RAVITZ MD
23150 RIVERSIDE #415
SOUTHFIELD MI 48075

KENNETH J RAY MD
28059 ELBA DR
GROSSE ILE MI 48138

HAROLD F RAYNOR MD L
49 VIRGINIA PK
DETROIT MI 48202

FLORO V RAYOS MD
13020 MACK AVE
DETROIT MI 48215

MASSOUD RAZI MD
30900 FORD RD
GARDEN CITY MI 48135

RAYMOND W REBANDT MD
2615 W JEFFERSON
TRENTON MI 48183

JOHN W REBUCK MD
2799 W GRAND BLVD
DETROIT MI 48202

FOSTER K REDDING MD
HENRY FORD HOSPITAL
DETROIT MI 48202

LOWELL G REDDING MD
1336 SOUTHFIELD RD
LINCOLN PARK MI 48146

BENJAMIN REDER MD
17301 W EIGHT MILE RD
DETROIT MI 48235

W EARL REDFERN M D
2799 W GRAND BLVD
DETROIT MI 48202

JOSEPH O REED JR MD
448 LINCOLN
DETROIT MI 48230

MELVIN L REED MD
4160 JOHN R ST
DETROIT MI 48201

CARL E REICHERT MD
18412 MACK AVENUE
GROSSE PTE MI 48236

JOHN G REID MD
1553 WOODWARD AVE
DETROIT MI 48226

WESLEY G REID MD R
34186 SPRG VALLEY DR
WESTLAND MI 48185

WILLIAM U REIDT MD
1800 TUXEDO
DETROIT MI 48206

MORRIS V REIFF MD
21701 W 11 MILE RD
SOUTHFIELD MI 48075

RICHARD E REINHARD MD
7815 E JEFFERSON AVE
DETROIT MI 48214

ERNEST R REINSH MD L
600 TRAILWOOD PATH
BIRMINGHAM MI 48010

ROBERT O REISIG M D
20867 MACK
DETROIT MI 48236

SAML G REISMAN MD
1553 WOODWARD AVE
DETROIT MI 48226

DAVID L E REIVE MD
8125 BRANCH DR-ORE LK
BRIGHTON MI 48116

JAMES E REMSKI MD
32301 CAMBRIDGE
LIVONIA MI 48154

GEORGE L RENO M D
970 FISHER BLDG
DETROIT MI 48202

ROBT F RENTENBACH MD
501 DAV WHITNEY BLDG
DETROIT MI 48226

MANUEL RESTO MD
21955 WILDWOOD
DEARBORN MI 48128

A D RESTO SOTO MD
17644 W WARREN
DETROIT MI 48228

WM S REVENO MD L
3001 W GRAND BLVD
DETROIT MI 48202

CLARENCE E REYNER MD L
10 PETERBORO ST
DETROIT MI 48201

ROBT M REYNOLDS MD
856 FISHER BLDG
DETROIT MI 48202

WM A REYNOLDS MD
HENRY FORD HOSPITAL
DETROIT MI 48202

HAROLD J REZANKA MD
1553 WOODWARD AVE
DETROIT MI 48226

FRANCIS P RHOADES MD
2414 16 BRODERICK TWR
DETROIT MI 48226

ROGER L RIAN MD
HENRY FORD HOSPITAL
DETROIT MI 48202

HAROLD B RICE MD
10 PETERBORO ST
DETROIT MI 48201

MESHEL RICE MD R
533 COATS RD
OXFORD MI 48051

WILLIAM J RICE MD
550 EASTLAND PROF BLDG
DETROIT MI 48236

BRUCE C RICHARDS MD A
23816 BUNKER HILL
MT CLEMENS MI 48043

M A RICHARDS MD
6309 CHARLEVOIX
DETROIT MI 48207

PAUL J RICK MD A
29630 HOOVER RD
WARREN MI 48093

WILFRED A RIDDELL MD
16985 FARMINGTON RD
LIVONIA MI 48154

RICHARD A RIDEOUT MD
6071 W OUTER DR
DETROIT MI 48235

GEO G RIECKHOFF MD L
14905 E JEFFERSON AVE
DETROIT MI 48215

JAMES A RIEDEN M D
18053 MUIRLAND
DETROIT MI 48221

JOHN B RIEGER MD L
746 PALLISTER
DETROIT MI 48202

MARY H RIEGER MD L
19285 LUCERNE DR
HIGHLAND PARK MI 48203

ROBT F RIETHMILLER MD
12444 E SEVEN MILE RD
DETROIT MI 48203

JOSEPH RINALDO JR MD
16001 W NINE MILE RD
SOUTHFIELD MI 48075

ROBERT W RINKEL MD
7319 PARK AVE
ALLEN PARK MI 48101

RICARDO A RIVAS MD
995 E JEFFERSON
DETROIT MI 48207

P P RIVERA MD
41001 W SEVEN MILE RD
NORTHVILLE MI 48167

JOSEPH V RIZZO MD
260 EASTLAND CTR
PROFESSIONAL BLDG
DETROIT MI 48225

PAUL RIZZO MD
38 WARNER RD
GROSSE PTE MI 48236

EDWARD L ROBB MD L
R R #2 BOX 249A
GAYLORD MI 49735

HERBERT J ROBB MD
2706 COMFORT
BIRMINGHAM MI 48010

ARTHUR J ROBERTS MD R
859 WINCHESTER
LINCOLN PARK MI 48146

GEORGE A ROBERTS MD
7220 GRATIOT AVE
DETROIT MI 48213

ERWIN ROBIN MD
18811 HAMPSHIRE
LATHRUP VILLAGE MI 48075

HOWARD ROBINSON MD
953 FISHER BLDG
DETROIT MI 48202

JAMES H ROBINSON JR MD
10440 W 7 MILE RD
DETROIT MI 48221

ERNST A RODIN MD
951 E LAFAYETTE
DETROIT MI 48207

ANA G RODRIQUEZ MD
P O BOX 5374
DETROIT MI 48211

KARL H ROEHL MD
1800 GRINDLEY PARK
DEARBORN MI 48124

AARON Z ROGERS MD
COTTAGE HOSPITAL
GROSSE POINTE MI 48236

GEO E B ROGERS MD
8425 TWELVE MILE RD
WARREN MI 48093

JOHN T ROGERS MD
29586 FIVE MILE RD
LIVONIA MI 48154

ROBERT P ROGERS MD
14200 PURITAN
DETROIT MI 48227

ABRAHAM S ROGOFF MD L
17000 W EIGHT MILE RD
SOUTHFIELD MI 48075

PAUL C ROHDE MD L
12282 E OUTER DR
DETROIT MI 48224

DIETER J ROHL MD
ST MARYS HOSPITAL
LIVONIA MI 48150

LEONIDAS ROJAS MD
2141 E JEFFERSON
DETROIT MI 48207

GRACIELA R ROJAS MD
17300 SCHAEFER HWY
DETROIT MI 48235

MICHAEL E ROLLINS MD
212 DAV WHITNEY BLDG
DETROIT MI 48226

HUGH W ROLLOCKS MD
7441 W 7 MILE RD
DETROIT MI 48221

STANLEY J ROMAN MD
15020 MICHIGAN AVE
DEARBORN MI 48126

RAYMOND ROMANSKI MD
16001 W NINE MILE RD
SOUTHFIELD MI 48075

CARLOS P ROMERO JR MD
3105 CARPENTER
DETROIT MI 48212

JOHN J RONAYNE JR MD
16345 W MCNICHOLS RD
DETROIT MI 48235

ROBERT C ROOD MD
24646 LYNDON
DETROIT MI 48239

FAYETTE C ROOT MD
719 NEW CENTER BLDG
DETROIT MI 48202

JAMES F ROSBOLT MD
8505 PLYMOUTH RD
DETROIT MI 48204

O PAUL ROSBOLT JR MD
8505 PLYMOUTH RD
DETROIT MI 48204

ARTHUR ROSE MD
7401 THIRD
DETROIT MI 48202

JOHN L ROSEFIELD MD L
65 W HANCOCK
DETROIT MI 48201

HAROLD M ROSEN MD
8620 W MC NICHOLS RD
DETROIT MI 48221

HARVEY ROSEN MD
1151 TAYLOR
DETROIT MI 48202

THEODORE S ROSEN MD A
17120 NEW JERSEY
SOUTHFIELD MI 48075

HERBERT ROSENBAUM MD
6720 EDINBOROUGH
BIRMINGHAM MI 48010

IRWIN K ROSENBERG MD
1400 CHRYSLER FREEWAY
DEPT OF SURGERY
DETROIT MI 48207

JERRY C ROSENBERG MD
1400 CHRYSLER EXPWY
DETROIT MI 48207

M K ROSENBERG MD
SINAI HOSPITAL
DETROIT MI 48235

ALVIN B ROSENBLOOM MD
17555 PARKSIDE
DETROIT MI 48221

ALBERT ROSENTHAL MD
27855 PLYMOUTH RD
LIVONIA MI 48150

LOUIS H ROSENTHAL MD
15401 W MC NICHOLS
DETROIT MI 48235

SAML ROSENTHAL MD
18055 GREENFIELD
DETROIT MI 48227

FELIX F ROSENWACH MD
19149 W SEVEN MILE RD
DETROIT MI 48219

NORMAN ROSENZWEIG MD
6767 W OUTER DR
DETROIT MI 48235

SAUL ROSENZWEIG MD L
2114 DAV BROD TOWER
DETROIT MI 48226

ARTHUR J ROSS MD
18215 GREENFIELD
DETROIT MI 48235

CHARLES V ROSS MD
25329 BRIARWYKE DR
FARMINGTON MI 48024

MERVYN B ROSS MD
19075 MIDDLEBELT RD
LIVONIA MI 48152

ROBERT R ROSS MD A
2323 N E 26TH AVE
POMPANO BEACH FL 33062

ALEXANDER N ROTA MD
4363 SUNNINGDALE DR
BLOOMFIELD HILLS MI 48013

EDWARD M ROTARIUS MD
PARKE DAVIS CO
DETROIT MI 48232

INA A C ROTHER MD
101 CHICAGO BLVD
DETROIT MI 48202

WALTER S ROTHWELL M D
2730 CHELSEA
TRENTON MI 48183

C M J ROTTENBERG MD
13419 FENKELL
DETROIT MI 48227

E N ROTTENBERG MD
20725 W SEVEN MILE RD
DETROIT MI 48219

LEON ROTTENBERG MD
13419 FENKELL AVE
DETROIT MI 48227

NORMAN J ROTTER MD
3815 PELHAM RD
DEARBORN MI 48214

WILLIAM ROUBECK MD
17000 W EIGHT MILE RD
SOUTHFIELD MI 48075

MICHAEL S ROWDA MD
7 CAMBRIDGE
PLEASANT RIDGE MI 48069

JOS J ROWE JR MD
401 N BRADY
DEARBORN MI 48124

L JAMES ROY MD
3800 WOODWARD AVE #512
DETROIT MI 48201

RICHARD R ROYER MD
18101 E WARREN AVE
DETROIT MI 48224

WILLIAM RUBINOFF MD
22341 W EIGHT MILE RD
DETROIT MI 48219

MELVYN RUBENFIRE MD
6767 W OUTER DR
DETROIT MI 48235

ALFRED I RUBENSTEIN MD
6767 OUTER DR W
DETROIT MI 48235

EPIMACO RUBIO MD
27139 SKYE DR WEST
FARMINGTON MI 48024

PAUL E RUBLE MD
605 DAVID WHITNEY BLDG
DETROIT MI 48226

NEWTON C RUCH MD
MT CARMEL MERCY HOSP
DETROIT MI 48235

EARL J RUDNER MD
18181 W 12 MILE RD
LATHRUP VILLAGE MI 48075

A D RUEDEMANN SR MD A
1633 DAV WHITNEY BLDG
DETROIT MI 48226

A D RUEDEMANN JR MD
1633 DAV WHITNEY BLDG
DETROIT MI 48226

MILTON J RUEGER MD
717 DAV WHITNEY BLDG
DETROIT MI 48226

RALPH C RUEGER MD
3399 DALEVIEW DR
ANN ARBOR MI 48103

RICHARD E RUEL MD
33750 FREEDOM RD
FARMINGTON MI 48024

LUIS C RUIZ MD
1678 MERRIANN RD
WAYNE MI 48184

EDWARD F RUNGE MD A
8295 39TH AVENUE N
ST PETERSBURG FL 33709

CLARENCE E RUPE MD
2799 W GRAND BLVD
DETROIT MI 48202

EMIL F RUPPRECHT MD
15901 GREENFIELD RD
DETROIT MI 48227

EMILIO RUSCIANO MD
GRACE HOSP
DETROIT MI 48201

DESMOND K RUSH MD
1429 DAV WHITNEY BLDG
DETROIT MI 48226

ROBERT L RUSKIN MD
SINAI HOSPITAL
DETROIT MI 48235

SAML H RUSKIN MD L
15901 W 9 MILE RD
SOUTHFIELD MI 48075

GEORG RUSSANOW MD
400 E LAFAYETTE
DETROIT MI 48226

HENRY N RUSSELL JR MD
15101 SOUTHFIELD
ALLEN PARK MI 48101

ISOBEL RUTHERFORD MD
DETROIT MEMORIAL HOSP
DETROIT MI 48226

RICHARD A RUZUMNA MD M
20820 W NINE MILE RD
SOUTHFIELD MI 48075

JAMES M RYAN MD
16888 GREENFIELD
DETROIT MI 48235

JAMES R RYAN MD
3930 E EIGHT MILE RD
DETROIT MI 48234

WILLIAM D RYAN MD R
BOX 10931
ST PETERSBURG FL 33733

RICHARD D RYSZEWSKI MD
20250 MACK AVE
DETROIT MI 48236

ENRIQUE SABBAGH MD
17100 W 12 MILE RD
SOUTHFIELD MI 48075

RASSUL S SABER MD
1400 CHRYSLER EXPWY
DETROIT MI 48207

LUTFI M SA DI MD L
72445 LASSIER RD
ROMEO MI 48065

HENRY H SADLER JR MD N
11 BELVEDERE
BELVEDERE CA 94920

JOSEPH F SADUSK MD
JOS CAMPAU @ RIVER
PARKE DAVIS & CO

DETROIT MI 48232

JOS T SADZIKOWSKI MD
6033 MIDDLEBELT RD
GARDEN CITY MI 48135

SHEIKH M SAEED MD
HENRY FORD HOSPITAL
DETROIT MI 48202

BERNARD A SAGE MD
210 WOODCREST DR
DEARBORN MI 48124

HECTOR J ST AMOUR M D L
25515 BLOSSINGHAM DR
DEARBORN HGHTS MI 48127

S N SAKORRAPHOS MD L
66 CRESTVIEW RD
BELMONT MA 02178

SAUL SAKWA M D
17000 W EIGHT MILE RD
SOUTHFIELD MI 48075

LACY J SALAN MD
1257 S MAIN ST
PLYMOUTH MI 48170

FERNANDO N SALAZAR MD
2645 GRANGE RD
TRENTON MI 48183

PAUL T SALCHOW MD
8285 HARTWELL
DETROIT MI 48228

GINO G SALCICCIOLI MD
3930 E EIGHT MILE RD
DETROIT MI 48234

EDWARD S SALEM MD
22420 TWYCKINGHAM WAY
SOUTHFIELD MI 48075

MICHAEL S SALESIN MD
SINAI HOSPITAL
DETROIT MI 48235

MITCHELL SALHANEY MD
15370 LEVAN RD
LIVONIA MI 48154

CAROLINE D SALL MD
6246 CHASE
DEARBORN MI 48126

WILLIAM T SALLEE MD
17000 W 8 MILE
SOUTHFIELD MI 48075

WILLIAM H SALOT MD
220 EASTLAND PROF BLDG
DETROIT MI 48236

HARRY C SALTZSTEIN MD L
16500 NORTH PARK DR
SOUTHFIELD MI 48075

A T SALVAGGIO MD
21811 KELLY RD
EAST DETROIT MI 48021

L CARL SAMBERG MD
2338 N WOODWARD
ROYAL OAK MI 48073

HUGO M SANCHEZ MD
2155 YORKTOWN
ANN ARBOR MI 48105

HARRY H SAND MD
24110 OXFORD
DEARBORN MI 48124

HERSHEL SANDBERG MD
17550 W 12 MILE RD
SOUTHFIELD MI 48075

IRVIN W SANDER MD R
4461 N E 31ST AVE
LIGHTHOUSE PTE FL 33064

ALVORD R SANDERSON MD L
978 PEMBERTON RD
GROSSE PTE MI 48230

NATHANIEL SANDLER MD
15901 W NINE MILE RD
SOUTHFIELD MI 48075

ALPHONSE M SANTINO MD M
208 EASTLAND PROF BLDG
DETROIT MI 48236

RAUL R SANTOS MD A
NORTHVILLE STATE HOSP
NORTHVILLE MI 48167

M ANDREW SAPALA MD
21471 CHERRY HILL RD
DEARBORN MI 48124

SIRUN SARAFOGLU MD
NORTHVILLE STATE HOSP
NORTHVILLE MI 48167

DOUGLAS A SARGENT MD
816 GRAND MARAIS
GROSSE PTE PARK MI 48236

RICHARD C SARGENT MD
17357 FENKELL ST
DETROIT MI 48227

WILLIAM R SARGENT MD
17357 FENKELL ST
DETROIT MI 48227

AREK L SARKISSIAN MD
3800 WOODWARD AVE
DETROIT MI 48201

MANUEL SARMIENTO MD
15600 PENNSYLVANIA
SOUTHFIELD MI 48075

JOHN B SARRACINO MD R
4309 FORESTWOOD DR
SAN JOSE CALIF 95121

JOHN J SAUK MD
29210 HOOVER
WARREN MI 48093

GENE A SAUNDERS MD
10933 FARMINGTON RD
LIVONIA MI 48150

RAYMOND J SAWCHUK MD
14632 BERWICK
LIVONIA MI 48154

DARIA H SAWDYK MD
7012 MICH AVE
DETROIT MI 48210

JOSEPH S SAZYC MD
22101 MOROSS RD
DETROIT MI 48236

HERMAN D SCARNEY MD
3535 W 13 MILE RD
ROYAL OAK MI 48072

H C SCHAEFER MD
1081 SO OXFORD
GROSSE PTE WOODS MI 48236

ROBT L SCHAEFER MD A
76 W ADAMS AVE
DETROIT MI 48226

ROBT L SCHAEFER JR MD
74 W ADAMS
DETROIT MI 48226

JOSEPH N SCHAEFFER MD
261 MACK BLVD
DETROIT MI 48201

MARTIN SCHAEFFER MD
16186 OXLEY RD
SOUTHFIELD MI 48075

NORMAN SCHAKNE MD
26711 WOODWARD AVE
HUNTINGTON WOODS MI 48070

DAVID A SCHANE MD
19159 BERKELEY
DETROIT MI 48221

IVAN C SCHATTEN MD
14626 E SEVEN MILE RD
DETROIT MI 48205

IRWIN J SCHATZ MD
1400 CHRYSLER EXPWY
DETROIT MI 48207

DANIEL E SCHECHTER MD
17000 W 8 MILE RD
SOUTHFIELD MI 48075

ALAN C SCHEER MD
DETROIT MEMORIAL HOSP
DETROIT MI 48226

ISAAC S SCHEMBECK MD L
1553 WOODWARD AVE
DETROIT MI 48226

ALAN D SCHER MD
19190 GREENFIELD
DETROIT MI 48235

ROBERT A SCHERER MD
470 FISHER BLDG
DETROIT MI 48202

OLEG P SCHIDLOWSKY MD
32300 SCHOOLCRAFT D-3
LIVONIA MI 48150

PETER S SCHIDLOWSKY MD
18917 SHADYSIDE
LIVONIA MI 48152

ARTHUR E SCHILLER MD L
1553 WOODWARD AVE
DETROIT MI 48226

RAYMOND D SCHIRACK MD R
P O BOX 41
WATERS MI 49797

NORMAN SCHKLOVEN MD
20051 WARRINGTON
DETROIT MI 48221

NATHAN H SCHLAFER MD L
304 DAV WHITNEY BLDG
DETROIT MI 48226

HENRY SCHLESINGER MD
13534 WOODWARD AVE
DETROIT MI 48203

H L SCHLUSSELL MD
1812 MIDDLEBELT
GARDEN CITY MI 48135

JOHN D SCHMALTZ MD A
601 NOTRE DAME
DETROIT MI 48230

GEORGE J SCHMIDT MD
7106 PARK AVE
ALLEN PARK MI 48101

HARRY E SCHMIDT MD R
15700 MIDDLEBURY DR
DEARBORN MI 48120

JOHANN SCHMIDT MD
7815 E JEFFERSON
DETROIT MI 48214

KLAUS P SCHMIDT MD
871 FISHER BUILDING
DETROIT MI 48202

WERNER F SCHMIDT MD
17800 E EIGHT MILE RD
DETROIT MI 48225

NORMAN L SCHMITT MD
17590 W 12 MILE RD
SOUTHFIELD MI 48075

ROBT J SCHNECK MD
1553 WOODWARD AVE
DETROIT MI 48226

CHAS L SCHNEIDER MD
22148 MICHIGAN AVE
DEARBORN MI 48124

CURT P SCHNEIDER MD
655 FISHER BLDG
DETROIT MI 48202

JOHN R SCHNEIDER MD
15001 W 8 MILE RD
DETROIT MI 48235

G D SCHOENFIELD MD
8830 W MC NICHOLS RD
DETROIT MI 48221

KENNETH G SCHOOFF MD
951 E LAFAYETTE
DETROIT MI 48207

SARAH S SCHUOTEN MD L
15901 W 9 MILE RD #214
SOUTHFIELD MI 48075

CALVIN E SCHORER MD
951 E LAFAYETTE
DETROIT MI 48207

C F SCHROEDER MD
26505 E RIVER RD
GROSSE ILE MI 48138

GISELA SCHROEDER MD
22408 PARK LANE
ST CLAIR SHORES MI 48080

HEINZ R SCHROEDER MD
1941 HAWTHORNE BLVD
DEARBORN MI 48128

KARL F SCHROEDER MD
7815 E JEFFERSON AVE
DETROIT MI 48215

S L SCHUCHTER MD
24425 HOOVER
WARREN MI 48089

CARL H SCHULTE MD L
717 REDDING RD
BIRMINGHAM MI 48009

CLARENCE H SCHULTZ MD
23100 CHERRY HILL
DEARBORN MI 48124

DONALD V SCHULTZ MD
23100 CHERRYHILL
DEARBORN MI 48124

ERNEST C SCHULTZ MD L
1553 WOODWARD AVE
DETROIT MI 48226

E C SCHULTZ JR MD
610 N WOODWARD AVE
BIRMINGHAM MICH 48011

BERNARD M SCHUMAN MD
HENRY FORD HOSPITAL
DETROIT MI 48202

BENJ SCHWARTZ MD
275 W GRAND BLVD
DETROIT MI 48216

LOUIS A SCHWARTZ MD A
P O BOX 315
ROCKPORT MA 01966

J A SCHWARTZBERG MD
19445 PLYMOUTH
DETROIT MI 48228

C F SCHWEIGERT MD
10627 CADIEUX RD
DETROIT MI 48224

BENJAMIN SCHWIMMER MD
27549 W 6 MILE RD
LIVONIA MI 48152

STANLEY V SCIARRINO MD L
16190 JAMES COUZENS
DETROIT MI 48221

MARRION U SCOTT MD
20170 MACK AVE
DETROIT MI 48236

WM J SCOTT MD L
20170 MACK AVE
GROSSE PTE WOODS MI 48236

GORDON P SCRATCH MD
1005 MUTUAL BLDG
DETROIT MI 48226

RAYMOND J SCREEN MD
18520 W SEVEN MILE RD
DETROIT MI 48219

F E SEABROOKS MD M
19360 SANTA ROSA
DETROIT MI 48221

ANDREW E SEGAL MD
19481 LIVERNOIS AVE
DETROIT MI 48221

NATHAN P SEGEL MD
19100 MANOR
DETROIT MI 48221

ALVIN H SEIBERT MD L
1180 BEDFORD RD
GROSSE PTE PARK MI 48230

A L SEIFERLEIN MD
68 PUTMAN PLACE
GROSSE PTE SHORES MI 48236

ELMER J SEIM MD
GRACE HOSP
DETROIT MI 48201

KARL SEITAM MD
10149 MICHIGAN AVE
DEARBORN MI 48126

RONALD A SELBST MD
26339 WOODWARD
HUNTINGTON WOODS MI 48070

WM G SELF MD
20861 MACK AVE
GROSSE PTE MI 48236

GRAHAM A SELLERS MD A
10535 W SEVEN MILE RD
DETROIT MI 48221

JOSEPH SELTZER M D
20905 GREENFIELD
SOUTHFIELD MI 48075

ISIDORE SELZER MD
1151 TAYLOR LABS DEPT
DETROIT MI 48202

STEPHEN D SENECOFF MD
18055 GREENFIELD
DETROIT MI 48235

POVILAS SEPETYS MD
25466 CLAIRVIEW
DEARBORN MI 48124

ARTHUR G SESKI MD
1069 FISHER BLDG
DETROIT MI 48202

FRED R SEVERYN MD
15830 FORT ST
SOUTHGATE MI 48192

GEO SEWELL MD L
31801 ARLINGTON DR
BIRMINGHAM MI 48009

GUY W SEWELL MD
17751 EAST WARREN AVE
DETROIT MI 48224

JEROME E SEYMOUR MD A
DETROIT GENERAL HOSP
DETROIT MI 48226

A KARIM SHAALAN MD
DOCTORS HOSPITAL
DETROIT MI 48207

MOHAMMED M SHAALAN MD A
NORTHVILLE STATE HOSP
NORTHVILLE MI 48167

ASGHAR SHAFADEH MD
28303 JOY RD
WESTLAND MI 48185

EUGENE M SHAFARMAN MD
3790 WOODWARD
DETROIT MI 48201

JOS H SHAFFER MD
2401 RADNOR DR
BIRMINGHAM MI 48009

LOREN W SHAFFER MD R
P O BOX 215
BOYNTON BEACH FL 33435

ROYCE R SHAFTER MD R
1188 PURITAN
BIRMINGHAM MI 48009

PARVIZ SHAMS-AVARI MD
27584 SCHOOLCRAFT
LIVONIA MI 48150

STANLEY J SHANOSKI MD
1910 DAV BRODERICK TWR
DETROIT MI 48226

H S SHAPIRO MD
19630 W MCNICHOLS RD
DETROIT MI 48219

JACK SHAPIRO MD
22669 GLASTONBURY
SOUTHFIELD MI 48075

REUBEN I SHAPIRO MD
22341 W 8 MILE RD
DETROIT MI 48219

ELIAS A SHAPTINI MD
1 WOODWARD AVENUE
DETROIT MI 48226

GEO M J SHARGEL MD
1800 TUXEDO
DETROIT MI 48206

ELWOOD A SHARP MD A
633 NEFF RD
GROSSE PTE MI 48230

WM D SHARPE MD
24621 W MCNICHOLS RD
DETROIT MI 48219

CHAS H SHARRER MD
1133 GRAYTON RD
GROSSE PTE PARK MI 48230

JACK SHARTSIS MD
DETROIT GEN HOSP
DETROIT MI 48226

FRANCIS P SHEA MD
HARPER HOSP
DETROIT MI 48201

HARRY SHECTER MD
2200 E GRAND BLVD
DETROIT MI 48211

IRENE C SHEEHAN MD
15520 GARFIELD
ALLEN PARK MI 48101

SHELIA SHEEHAN MD
3011 W GRAND BLVD
DETROIT MI 48202

MARCUS B SHEFFER MD
32900 FIVE MILE RD
LIVONIA MI 48154

PHILIP SHEINBERG MD A
OPHTHALMOLOGY DEPT
DETROIT GENERAL HOSP

DETROIT MI 48226

ARMEN SHEKERJIAN MD
13815 PURITAN
DETROIT MI 48227

DOLORES J SHELFOON MD
20101 BRIARCLIFF RD
DETROIT MI 48221

ALBERT SHEMTOB MD
12010 LINWOOD
DETROIT MI 48206

MARVIN SHERMAN MD
20100 W 10 1/2 MILE RD
SOUTHFIELD MI 48075

NIMROD M SHERMAN MD
3413 MCDOUGALL
DETROIT MI 48207

WM L SHERMAN JR MD A
201 E KIRBY
DETROIT MI 48202

EDGAR R SHERRIN MD
19021 W MCNICHOLS
DETROIT MI 48219

FREDERICK F SHEVIN MD
671 FISHER BLDG
DETROIT MI 48202

A P SHEWCHUK MD
7300 ALLEN RD
ALLEN PARK MI 48101

WM L SHIELDS MD L
510 HILDALE
DETROIT MI 48203

LOUIS Z SHIFRIN MD
HENRY FORD HOSPITAL
DETROIT MI 48202

PETER G SHIFRIN MD
3535 W 13 MILE NO 507
ROYAL OAK MI 48072

LOUIS SHIOVITZ MD
5419 MICHIGAN AVE
DETROIT MI 48210

BENJ SHLAIN MD A
31156 HUNTLEY SQ EAST
BIRMINGHAM MI 48009

CLAYTON M SHORS M D
20861 MACK
GROSSE PTE WOODS MI 48236

GERALD SHORTZ MD A
914 PIRATES AVE
VERO BEACH FL 32960

ALFRED J SHREVE MD
4520 FIRESTONE AVE
DEARBORN MI 48126

JOHN M SHUEY MD
17198 OAK DR
DETROIT MI 48221

ARTHUR S SHUFRO MD
28585 RIVERCREST DR
SOUTHFIELD MI 48075

HERSCHEL A SHULMAN MD
207 NORTHLAND MED BLD
SOUTHFIELD MI 48075

EDWARD J SHUMAKER MD
75 LOTHROP
GROSSE PTE MI 48236

EDWARD H SIEBER MD
6650 GREENFIELD RD
DEARBORN MI 48126

WILLIAM E SIEBERT MD
23023 ORCHARD LAKE RD
FARMINGTON MI 48024

JOHN L SIEFERT MD R
PO BOX 601
JUPITER FL 33458

HENRY SIEGEL MD
18400 W 12 MILE RD
SOUTHFIELD MI 48075

JOSE M SIERO MD
9105 VAN DYKE
DETROIT MI 48213

LORRAINE A SIEVERS MD
1457 DAVID WHITNEY BG
DETROIT MI 48226

JOHN W SIGLER MD
HENRY FORD HOSP
DETROIT MI 48202

ENRIQUE E SIGNORI MD
30900 FORD RD
GARDEN CITY MI 48135

ALLEN SILBERGLEIT MD
1400 CHRYSLER EXPWY
DETROIT MI 48207

JACOB A SILL MD
1125 ARDMOOR DR
BIRMINGHAM MI 48010

JOHN J SILLER MD
17000 W 8 MILE RD
SOUTHFIELD MI 48075

RICHARD D SILLS MD
5675 FORMAN DR
BIRMINGHAM MI 48010

YVAN J SILVA MD
3800 WOODWARD AVE
DETROIT MI 48201

ISRAEL Z SILVARMAN MD L
9105 VAN DYKE AVE
DETROIT MI 48213

DONALD F SILVER MD
467 FISHER BLDG
DETROIT MI 48202

ISRAEL W SILVER MD
20000 W CHICAGO
DETROIT MI 48228

ROBERT R SILVER MD
60 W HANCOCK
DETROIT MI 48201

MAURICE M SILVERMAN MD
17301 W EIGHT MI RD
DETROIT MI 48235

MAX SILVERMAN MD
2240 W GRAND BLVD
DETROIT MI 48208

M E SILVERSTEIN MD
20970 INDEPENDENCE
SOUTHFIELD MI 48075

O D SILVERSTEIN MD
17000 W 8 MILE RD
SOUTHFIELD MI 48075

DONALD R SIMMONS MD
529 FISHER BLDG
DETROIT MI 48202

HEINZ G SIMON MD
12206 MORANG
DETROIT MI 48224

DAVID F SIMPSON MD
DETROIT GEN HOSP
DEPT OF ANESTH
DETROIT MI 48226

GORDON E SIMPSON MD
18101 E WARREN AVE
DETROIT MI 48224

CLYDE B SIMSON MD
951 E LAFAYETTE
DETROIT MI 48207

BAGESHWARI P SINHA MD A
DETROIT GENERAL HOSP
DETROIT MI 48226

GEO W SIPPOLA MD L
13603 LA SALLE BLVD
DETROIT MI 48238

B J SIVAK MD
24665 SANTA BARBARA
SOUTHFIELD MI 48075

MICHEL A SKAFF MD
1059 BEDFORD
GROSSE PTE PARK MI 48236

MANUEL SKLAR M D
18400 SCHAEFER RD
DETROIT MI 48235

EDWARD J SKULLY MD
14000 LINNHURST
DETROIT MI 48205

FRANK J SLADEN MD L
HENRY FORD HOSP
DETROIT MI 48202

PETER SLAUGHTER MD
5224 ST ANTOINE
DETROIT MI 48202

LEO W SLAZINSKI MD L
7618 MICHIGAN AVE
DETROIT MI 48210

JOHN G SLEVIN MD
1132 WHITTIER AVE
GROSSE PTE PARK MI 48236

EDWARD P SLIWIN MD
13244 W WARREN
DEARBORN MI 48126

JOS SLUSKY MD
854 FISHER BLDG
DETROIT MI 48202

ROBT F SLY MD
2101 MONROE BLVD
DEARBORN MI 48124

HENRY SMALL MD
15300 W MCNICHOLS RD
DETROIT MI 48235

JOHN SMALL MD
19223 CONANT
DETROIT MI 48234

HOMER M SMATHERS MD
17620 W MCNICHOLS
DETROIT MI 48235

WARD M SMATHERS MD
17620 W MCNICHOLS
DETROIT MI 48235

ARTHUR R SMECK MD L
1036 WATERMAN AVE
DETROIT MI 48209

JAMES J SMIGGEN MD
15901 W 9 MILE RD
SOUTHFIELD MI 48075

BARRY G SMILER MD
20925 ANDOVER
SOUTHFIELD MI 48075

ANDREW J SMITH JR MD
2950 PURITAN
DETROIT MI 48238

DOUGLAS H SMITH MD
10151 MICHIGAN
DEARBORN MI 48126

HENRY L SMITH MD L
16401 GRAND RIVER AVE
DETROIT MI 48227

RICHARD H SMITH MD
5050 JOY RD
DETROIT MI 48204

RICHMOND W SMITH JR MD
2799 W GRAND BLVD
DETROIT MI 48202

ROGER F SMITH M D
28400 W SUNSET BLVD
LATHRUP VILLAGE MI 48075

STANLEY M SMYKA MD
15731 GLENWOOD
DETROIT MI 48205

EUGENE A SNIDER MD
20905 GREENFIELD
SOUTHFIELD MI 48075

EDWIN C SNOKE MD
2901 WEST RD
TRENTON MI 48183

LINWOOD W SNOW MD L
502 W MAIN ST
NORTHVILLE MI 48167

RICHARD J SNYDER MD
33433 SIX MILE RD
LIVONIA MI 48152

ROBT A SOBEL MD
20211 GREENFIELD
DETROIT MI 48235

RALPH B SODERBERG MD
7815 E JEFFERSON AVE
DETROIT MI 48214

SIDNEY SOIFER MD
SINAI HOSPITAL
DETROIT MI 48235

WM M SOKOL MD
15901 W NINE MILE RD
SOUTHFIELD MI 48075

RAYMOND A SOKOLOV MD
3011 W GRAND BLVD
DETROIT MI 48202

A H SOKOLOWSKI MD
20445 VAN DYKE AVE
DETROIT MI 48234

LINCOLN E SOLBERG MD
2021 MONROE
DEARBORN MI 48124

FRANK J SOLER MD
25447 PLYMOUTH
DETROIT MI 48239

SION SOLEYMANI MD
4400 LIVERNOIS
DETROIT MI 48210

ALEX S SOLLER MD
19309 GREENFIELD
DETROIT MI 48235

A B SOLOMON MD
26440 SOUTHFIELD RD
LATHRUP VILLAGE MI 48075

ROBERT J SOLOMON MD
15101 SOUTHFIELD
ALLEN PARK MI 48101

OTTO P SOLTES MD
17000 W EIGHT MILE
SOUTHFIELD MI 48075

THOS H SOMERVILLE MD
36475 FIVE MILE RD
LIVONIA MI 48154

OMER K SONBAY MD
NORTHVILLE ST HOSP
NORTHVILLE MI 48167

LEWIS P SONDA JR MD
10951 FARMINGTON RD
LIVONIA MI 48150

ROBERT A SONGE MD
OAKWOOD HOSPITAL
DEARBORN MI 48121

MASSOUD SOOUDI MD
1066 FISHER BLDG
DETROIT MI 48202

MILTON L SOROCK MD
20905 GREENFIELD RD
SOUTHFIELD MI 48075

CARLOS M A SOSA MD
6307 W FORT ST
FISHER BODY DIV
GMC
DETROIT MI 48209

FREDDY R SOSA MD
28245 SOUTHFIELD
LATHRUP VILLAGE MI 48075

RAYMOND D SPHIRE MD
1420 ST ANTOINE
DETROIT MI 48226

ADOLPH S SPIRO MD
13240 HARPER
DETROIT MI 48213

BERTRAM J SPIWAK MD
7407 CATHEDRAL DR
BIRMINGHAM MI 48010

BENJ R SPRINGBORN MD L
15818 E WARREN AVE
DETROIT MI 48224

CARL J SPRUNK MD
2900 OAKWOOD BLVD
MELVINDALE MI 48122

ETHELBERT SPURRIER MD L
261 KENWOOD CT
GROSSE PT FARMS MI 48236

WALTER M SQUIRES MD R
1616 S 28 AVE
ST PETERSBURG FL 33712

MARY S STAHLY MD
SINAI HOSP
DETROIT MI 48235

GERALD A STAIR MD
WAYNE COUNTY GEN HOSP
ELOISE MI 48132

HUGH STALKER MD R
824 LAKESHORE RD
GROSSE PTE SHRS MI 48236

BENJAMIN B STAMELL MD
17000 W EIGHT MILE RD
SOUTHFIELD MI 48075

MEYER STAMELL MD
14634 GREENFIELD ST
DETROIT MI 48227

MYRON R STANTON MD
7441 W 7 MILE RD
DETROIT MI 48221

WM J STAPLETON JR MD L
201 E KIRBY AVE
DETROIT MI 48202

RENATO STARICCO MD
3783 FORT ST
LINCOLN PARK MI 48146

DARRELL E STATZER MD
3800 WOODWARD #502
DETROIT MI 48201

HOWARD P STAUB MD R
9210 JEROME
DETROIT MI 48239

LOUIS W STAUDT MD
1201 PILGRIM
BIRMINGHAM MI 48009

CHAS E STEBBINS MD
705 NORTHLAND MED BLDG
SOUTHFIELD MI 48075

WILLIAM B STEEL MD
HUTZEL HOSP
DETROIT MI 48232

CHAS A D STEEPE MD
20340 HARPER
HARPER WOODS MI 48236

ANDREW E STEFANI MD
471 OXFORD RD
GROSSE PTE WOODS MI 48236

ERNEST L STEFANI MD L
18455 JAS COUZENS HWY
DETROIT MI 48235

RAYMOND T STEFANI MD
13516 STOEPEL
DETROIT MI 48238

ZWI STEIGER MD
VA HOSPITAL
ALLEN PARK MI 48101

ALBERT H STEIN MD
16300 W 9 MILE RD
SOUTHFIELD MI 48075

HARVEY S STEIN MD
22341 W EIGHT MILE RD
DETROIT MI 48219

SAUL C STEIN MD
23105 VAN DYKE
WARREN MI 48089

A L STEINBACH MD
7815 E JEFFERSON
DETROIT MI 48214

E J STEINBERGER MD L
6402 W FORT
DETROIT MI 48209

FREDK B STEINER MD
29108 FORD RD BOX 356
GARDEN CITY MI 48135

S D STEINER MD
3044 W GRAND BLVD
DETROIT MI 48202

MILTON J STEINHARDT MD
18910 BIRCHCREST
DETROIT MI 48221

BRUCE W STEINHAUER MD
HENRY FORD HOSP
DETROIT MI 48202

CHESTER E STELLHORN MD L
16589 WARWICK
DETROIT MI 48219

MARY C STELLHORN MD A
16616 MACK AVE
DETROIT MI 48224

EDWARD M STEMPEL MD
18324 FAIRFIELD AVE
DETROIT MI 48221

RICHARD F STERBA MD
18228 MACK AVE
GROSSE PTE MI 48236

EDWARD A STERN MD L
15901 W 9 MILE RD
C/O DR J STERN

SOUTHFIELD MI 48075

JOSEPH W STERN MD
15901 W 9 MILE RD
SOUTHFIELD MI 48075

JULIAN STERN MD
15121 W MCNICHOLS RD
DETROIT MI 48235

LEONARD H STERN MD
22699 VAN DYKE
WARREN MI 48089

LOUIS D STERN MD L
1553 WOODWARD AVE
DETROIT MI 48226

VERNON STERNHILL MD
1800 TUXEDO
DETROIT MI 48206

CHAS H STEVENS MD
15901 W 9 MILE RD
SOUTHFIELD MI 48075

TATJANA STEVENS MD
34815 MICHIGAN AVE
WAYNE MI 48184

CHAS S STEVENSON MD
960 FISHER BLDG
DETROIT MI 48202

LEE B STEVENSON MD
22812 WALSINGHAM RD
FARMINGTON MI 48024

MAITLAND N STEWART JR
20905 GREENFIELD
SOUTHFIELD MI 48075

MARJORIE STEWART MD A
581 GOLFCREST
DEARBORN MI 48124

ROBERT M STEWART MD
10933 FARMINGTON
LIVONIA MI 48150

DANL M STIEFEL MD L
1563 DAV WHITNEY BLDG
DETROIT MI 48226

KARL STILLWATER MD
29305 PTE-O-WOODS #207
SOUTHFIELD MI 48075

DWIGHT E STITH MD
505 OWEN ST
DETROIT MI 48202

GODFREY D STOBBE MD
GRACE HOSP
DETROIT MI 48201

THOMAS B STOCK MD
25500 FRIAR LANE
SOUTHFIELD MI 48075

LAWRENCE L STOCKER MD
26615 GREENFIELD
SOUTHFIELD MI 48075

MARVIN L STOCKER MD
16401 GRAND RIVER
DETROIT MI 48227

BENJ W STOCKWELL MD
1553 WOODWARD AVE
DETROIT MI 48226

THADDEUS STOKFISZ M D
7012 MICHIGAN
DETROIT MI 48210

RAYMOND STOLLER M D
25210 GRAND RIVER AVE
DETROIT MI 48240

SIDNEY L STONE MD
22790 KELLY RD
E DETROIT MI 48021

MICHAEL R STOYKA MD
155 STEPHENS
GROSSE PTE MI 48236

RICHARD E STRAITH MD
17100 W 12 MILE RD
SOUTHFIELD MI 48075

MARTIN E STRAND MD
22400 CHERRY HILL
WEST DEARBORN MI 48124

PETER K STRATTON MD
5237 OAKMAN
DEARBORN MI 48128

ERNEST G STRAUSS MD
30605 CARTIER DR
PALOS VERDES PEN CA 90274

HENRY D STRICKER MD L
330 WEAVER RD R#2
MILFORD MI 48042

FRED L STRICKROOT MD
3800 BISHOP RD
DETROIT MI 48224

G E STRONSKI MD
9901 WHITTIER
DETROIT MI 48224

JAMES D STROUD MD A
DETROIT GENERAL HOSP
DETROIT MI 48226

JOAN C STRYKER MD
2853 BIDDLE
WYANDOTTE MI 48192

WALTER A STRYKER MD
P O BOX 10
WYANDOTTE MI 48192

CLAYTON T STUBBS MD R
5 BELLEVIEW
MT CLEMENS MI 48043

HAROLD W STUBBS MD L
13700 WOODWARD AVE
DETROIT MI 48203

JANUSZ SUBCZYNSKI MD
17800 EIGHT MILE RD
HARPER WOODS MI 48225

LEONARD SUDAKIN MD
15901 W 9 MILE RD
SOUTHFIELD MI 48075

IRENE T S SUEN MD
CHRYSLER CORP BOX 1919
DETROIT MI 48231

H SAUL SUGAR MD
970 FISHER BLDG
DETROIT MI 48202

MARCUS H SUGARMAN MD
15201 W MC NICHOLS
DETROIT MI 48235

NORBERTO A SUGAYAN MD
34275 MUNGER DR
LIVONIA MI 48154

PAUL J SULLIVAN MD
26711 WOODWARD
HUNTINGTON WOODS MI 48070

THOMAS M SULLIVAN MD
951 E LAFAYETTE
DETROIT MI 48207

L CARL SULTZMAN MD
55 VENDOME
GROSSE PTE FARMS MI 48236

BERNARD T SUMCAD MD
861 MONROE BLVD
DEARBORN MI 48124

WM A SUMMERS MD
1553 WOODWARD AVE
DETROIT MI 48226

RICHARD W SUNDLING MD
714 NEW CENTER BLDG
DETROIT MI 48202

COLIN T SUTHERLAND MD
39000 MOUND RD
STERLING HEIGHTS MI 48659

RAYMOND H SUWINSKI MD
9801 CONANT ST
HAMTRAMCK MI 48212

LIONEL F SWAN MD
9245 MACK
DETROIT MI 48214

CARL W SWANSON MD
936 ALTER RD
DETROIT MI 48215

ROBT G SWANSON MD
314 EASTLAND PROF BLDG
DETROIT MI 48236

FRED G SWARTZ JR MD
377 FISHER RD SUITE F
GROSSE PTE MI 48230

DONALD N SWEENY JR MD
8445 E JEFFERSON
DETROIT MI 48214

BERTRAND C SWITZER MD R
1862 RIVERSIDE
COLUMBUS OH 43212

JOHN T SYDNOR MD
3800 WOODWARD AVE
DETROIT MI 48201

CHARLES S SYPHAX MD
4000 W DAVISON
DETROIT MI 48238

G G SZAPPANYOS MD A
HOSP CANTONAL DEGENEVE
GENEVE SWITZERLAND

C EMERICK SZILAGYI MD
HENRY FORD HOSP
DETROIT MI 48202

JOSEPH P SZOKOLAY MD
HENRY FORD HOSP
DETROIT MI 48202

RODMAN E TABER MD
HENRY FORD HOSP
DETROIT MI 48202

ALBERT J TACTAC MD
15240 MERRIMAN
LIVONIA MI 48154

JOELLA G TADIAN MD
23100 CHERRY HILL
DEARBORN MI 48124

JOHN P TAGETT MD
25750 W OUTER DR
LINCOLN PARK MI 48146

FRANK G TALBOT MD
1365 CASS
DETROIT MI 48226

EDWARD J TALLANT MD
18041 GREENFIELD
DETROIT MI 48235

ROBT W TALLEY MD
HENRY FORD HOSP
DETROIT MI 48202

FREDK N TALMERS MD
VA HOSPITAL
ALLEN PARK MI 48101

E J TAMBLYN MD L
737 MARLBOROUGH
DETROIT MI 48215

LIONG G TAN MD
22813 CANTERBURY DR
ST CLAIR SHORES MI 48092

NASIT TANAL MD
39573 HAGGERTY RD
NORTHVILLE MI 48167

EMANUEL TANAY MD
861 FISHER BLDG
DETROIT MI 48202

JOSE S TANDOC MD
P O BOX 570

FORD MOTOR CO
WARREN MI 48090

NATALIA M TANNER MD
8401 WOODWARD AVE
DETROIT MI 48202

JULIUS C TAPERT MD A
120 MACKINAC
HARSENS ISLAND MI 48028

HARRY TARPINIAN MD
10955 FARMINGTON RD
LIVONIA MI 48150

HELEN E TASKER MD
76 W ADAMS AVE
DETROIT MI 48226

RALPH N TASSIE MD L
15000 GRATIOT AVE
DETROIT MI 48205

GABRIEL A TATELIS MD
21811 KELLY RD
E DETROIT MI 48021

MAURICE TATELMAN MD
6767 W OUTER DR
DETROIT MI 48235

WM H TAURENCE MD
1860 FORD AVE
WYANDOTTE MI 48192

CEMALETTIN TAVLAN MD
35779 JOHNSTOWN RD
FARMINGTON MI 48024

AMOS TAYLOR III MD
4059 W DAVISON
DETROIT MI 48238

JUNIUS L TAYLOR MD
1566 W GRAND BLVD
DETROIT MI 48208

MILES TAYLOR MD
550 ESTLD PROF BLDG
DETROIT MI 48236

NELSON M TAYLOR MD
215 DEAN LANE
GROSSE PTE PARK MI 48236

RICHARD A TAYLOR MD
28 W ADAMS ST
DETROIT MI 48226

WARD M TAYLOR MD
2201 E JEFFERSON AVE
DETROIT MI 48207

WM V TAYLOR MD
17200 E WARREN
DETROIT MI 48224

HENRY A TAZZIOLI MD
21970 MOROSS RD
DETROIT MI 48236

MALCOLM J J TEAR MD
862 W MC NICHOLS RD
DETROIT MI 48203

MYER TEITELBAUM MD
18510 MEYERS ROAD
DETROIT MI 48235

ERTUGRUL TEKISALP MD
32300 SCHOOLCRAFT
LIVONIA MI 48150

ALLEN J TELMOS MD
16401 GRAND RIVER AVE
DETROIT MI 48227

THOS A TENAGLIA MD
3180 FORT ST
LINCOLN PARK MI 48146

ELMER C TEXTER MD L
16840 E WARREN
DETROIT MI 48224

ANNA M THEODOULOU MD
18700 MEYERS RD

GRACE HOSP N W
DETROIT MI 48235

GLAUCOS THEODOULOU MD
1800 TUXEDO
DETROIT MI 48206

LEON D THOMAS MD
17320 LIVERNOIS
DETROIT MI 48221

L MURRAY THOMAS MD
801 DAV WHITNEY BLDG
DETROIT MI 48226

ARTHUR L THOMPSON MD
12632 DEXTER
DETROIT MI 48238

HUGH D THOMPSON MD A
ROUTE 3 BOX 388
GAYLORD MI 49735

WM A THOMPSON MD R
12632 DEXTER
DETROIT MI 48238

DANL C THOMSON MD
2934 BIDDLE AVE
WYANDOTTE MI 48192

JERRY A THORNTON MD
525 VISGER RD
ECORSE MI 48229

G C THOSTESON MD
14596 GRANDVILLE
DETROIT MI 48223

ROBT C THUMANN MD
20045 MACK AVE
GROSSE PTE WOODS MI 48236

SADIE THUMIM MD
10445 BELTON
DETROIT MI 48204

RICHARD J TIMMA MD
17220 W 8 MILE RD
SOUTHFIELD MI 48075

SIK WOO TING MD
22700 GARRISON #408
DEARBORN MI 48124

YOEH MING TING MD
29555 BRISTOL LN
BIRMINGHAM MI 48010

JOYCE TIPPINS MD
4732 BARCROFT WAY
STERLING HEIGHTS MI 48077

ROBERT E TOAL MD
18901 GRAND RIVER
DETROIT MI 48223

RODRIGO R TOBAR MD
21110 WINCHESTER
SOUTHFIELD MI 48075

THEODORE G TODOROFF MD
2021 MONROE
DEARBORN MI 48124

JESSE C TOLBERT MD
18984 LIVERNOIS
DETROIT MI 48221

ESTELLE P TORRES MD
3985 CANIFF
HAMTRAMCK MI 48212

RAUL M TORRES JR MD
3985 CANIFF ST
HAMTRAMCK MI 48212

LAWRENCE P TOURKOW MD
8319 HENDRIE
HUNTINGTON WOODS MI 48070

FRANK M TOWNSEND JR MD L
1055 TRUMBULL
DETROIT MI 48216

MARGARET D TOXOPEUS MD
DETROIT GENERAL HOSP
DETROIT MI 48226

JOHN M TRACEY M D
15317 W MC NICHOLS
DETROIT MI 48235

EDWARD G TRACY MD
239 WARRINGTON RD
BLOOMFIELD HILLS MI 48013

LIBORIA TRANCHIDA MD
DETROIT GEN HOSP
DETROIT MI 48226

E J TREISMAN MD
15105 W SEVEN MILE RD
DETROIT MI 48235

HAROLD L TREMAIN MD
1300 LAFAYETTE E #1306
DETROIT MI 48207

GEO A TROESTER MD
81 E KIRBY
DETROIT MI 48202

MARTIN B TROTSKY MD
7411 THIRD AVE
DETROIT MI 48202

PAUL K TRUBA MD
22770 KELLY RD
EAST DETROIT MI 48021

JOHN M TRUDEAU MD
14200 PURITAN
DETROIT MI 48221

PAUL E TRUDGEN MD
1224 BEECHMONT
DEARBORN MI 48124

RONALD E TRUNSKY MD
SINAI HOSPITAL
DETROIT MI 48235

SAMUEL TRUPIANO MD
420 EASTLAND PROF BLDG
DETROIT MI 48236

S W TRYTHALL MD
BOX 33
ORCHARD LAKE MI 48033

S S TSANGALIAS MD
63 KERCHEVAL
GROSSE PTE FARMS MI 48236

GEORGE T C TSENG MD
16749 WHITLEY DR
LIVONIA MI 48154

FLOYD S TUKEL MD
1922 MONROE
DEARBORN MI 48124

JOHN A TULLOCH MD
326 EASTLAND CTR
PROFESSIONAL BLDG

HARPER WOODS MI 48225

R T TUMBOKON MD
700 STEWART RD
MONROE MI 48161

VINCENT J TURCOTTE MD A
545 LAKELAND RD
GROSSE PTE MI 48230

HENRY TURKEL MD
8000 W SEVEN MILE RD
DETROIT MI 48221

BENJAMIN S TURLA MD
GRACE HOSPITAL
DETROIT MI 48201

JACK V TURNBULL MD
22243 W WARREN AVE
DEARBORN HEIGHTS MI 48127

EDWARD T TURNER MD
5050 JOY RD
DETROIT MI 48204

RACHEL E TURNER MD
895 W OAKRIDGE
FERNDALE MI 48220

ROBERT R TURNER MD
3745 MONROE BLVD
DEARBORN MI 48124

TAISJA Z TWOREK MD
2 WOODSIDE PARK BLVD
PLEASANT RIDGE MI 48069

ODIE T UDDYBACK MD
8401 WOODWARD AVE
DETROIT MI 48202

CHESTER J UJDA MD
32302 WOODBROOK
WAYNE MI 48184

ARTHUR A ULMER MD
79 GREENBRIAR
GROSSE PTE SHORES MI 48236

JOHN L ULRICH MD
18550 W OUTER DR
DEARBORN MI 48128

WILLIS H ULRICH MD
22365 GRAND RIVER AVE
DETROIT MI 48219

WM T UNKEFER MD
17401 GREENFIELD RD
DETROIT MI 48235

RUTILIO URIBE MD
ST JOSEPH HOSPITAL
DETROIT MI 48211

HAROLD E USNDEK MD
18485 MACK AVE
DETROIT MI 48236

OTONAS VAITAS M D
10531 FARMINGTON RD
LIVONIA MI 48150

V K VAITKEVICIUS MD
1400 CHRYSLER FREEWAY
DETROIT MI 48207

R I VALDESUSO MD
19200 COLLINSON
EAST DETROIT MI 48021

JOSE V VALDEZ MD
5450 FORT ST
TRENTON MI 48183

E VALDES VALENZUELA MD
28382 HARWICH
FARMINGTON MI 48024

F G P VALVEKENS MD M
1800 TUXEDO
DETROIT MI 48206

WM L VAN ARSDALE MD A
1000 CHUNG CHENG RD
TAIPEI TAIWAN

L A VAN BECELAERE MD
15830 FORT
SOUTHGATE MI 48192

H J VANDEN BERG JR MD
612 PROFESSIONAL PLAZA
DETROIT MI 48201

F G VAN DEVENTER MD
19959 VERNIER RD
HARPER WOODS MI 48236

JAMES E VAN ECK MD
11540 MORANG DR
DETROIT MI 48224

DONALD E VAN HOEK MD
20323 MACK
GROSSE PTE WOODS MI 48236

L F VAN RAAPHORST MD
861 MONROE
DEARBORN MI 48124

E J VAN SLYCK MD
HENRY FORD HOSP
DETROIT MI 48202

HENRY J VANVALZAH MD
FORD MTR CO MILLER RD
DEARBORN MI 48120

HABIB VARIZI-NAZARI MD
4400 ORCHARD LAKE RD
ORCHARD LAKE MI 48033

HRATCH VARTANIAN MD
6246 CHASE RD
DEARBORN MI 48126

VASILE O VASU MD L
12897 WOODWARD AVE
HIGHLAND PK MI 48203

CLARENCE B VAUGHN MD
GRACE HOSPITAL
DETROIT MI 48201

WILLIAM F VELING MD
13700 WOODWARD
HIGHLAND PARK MI 48203

RAMON W VERA MD
15901 W 9 MILE RD
SOUTHFIELD MI 48075

JAY VICTOR MD
14575 SOUTHFIELD
ALLEN PARK MI 48101

PATRICK A VILLANI MD
20811 KELLY RD
EAST DETROIT MI 48021

ISAIAS S VILLAROSA MD
GRACE HOSP
DETROIT MI 48201

CARLOS G VILLARREAL MD
20225 ANN ARBOR TRAIL
DEARBORN HEIGHTS MI 48127

CHARLES C VINCENT MD
2424 PURITAN
DETROIT MI 48238

JOHN W VINCENT MD
22146 FORD RD
DEARBORN MI 48128

W FRASER VIPOND MD
15398 GRATIOT AVE
DETROIT MI 48205

GEO J VISCOMI MD
24240 MICHIGAN AVE
DEARBORN MI 48124

DONALD W VISSCHER MD
12922 W WARREN
DEARBORN MI 48126

LLOYD VOGEL MD A
OPHTHALMOLOGY DEPT
DETROIT GENERAL HOSP

DETROIT MI 48226

MILTON D VOKES MD L
10182 GRATIOT AVE
DETROIT MI 48213

VOLLRAD J VONBERG MD
232 EASTLAND PROF BLDG
HARPER WOODS MI 48225

E C VONDERHEIDE MD A
17190 STRATHMOOR
DETROIT MI 48235

NOEL A VONGLAHN MD
19075 MIDDLEBELT
LIVONIA MI 48152

ARTHUR J VORWALD MD A
1741 DECKNER AVE
GREEN BAY WISC 54302

ALBERT E VOSSLER MD L
1144 DAV WHITNEY BLDG
DETROIT MI 48226

I J VOUDOUKIS MD
3800 WOODWARD AVE
DETROIT MI 48201

MICHAEL VULPE MD
HARPER HOSPITAL
DETROIT MI 48201

JOHN WADE MD
17000 W EIGHT MILE RD
SOUTHFIELD MI 48075

HAROLD R WAGENBERG MD
19201 W 7 MILE RD
DETROIT MI 48219

LYLE G WAGGONER MD
1010 PROFESSIONAL PL
DETROIT MI 48201

JOHN R WAGNER MD
17712 MACK AVE
DETROIT MI 48224

GEORGE F WAGONER MD
530 COBB
CADILLAC MI 49601

RICHARD A WAHL MD
18211 W 12 MILE RD
LATHRUP VILLAGE MI 48075

BENJ J WAILES JR MD
3800 WOODWARD AVE
DETROIT MI 48201

MAX J WAINGER MD
17550 W 12 MILE RD
SOUTHFIELD MI 48075

MICHAEL A WAINSTOCK MD
621 DAVID WHITNEY BL
DETROIT MI 48226

EVERAL M WAKEMAN MD
155 S DENWOOD
DEARBORN MI 48124

GEO L WALDBOTT MD L
2930 W GRAND BLVD
DETROIT MI 48202

FRANK B WALKER II MD
1206 BALFOUR RD
GROSSE PTE PARK MI 48230

GEO L WALKER MD
7815 E JEFFERSON AVE
DETROIT MI 48214

ROBERT M WALKER MD
2101 MONROE
DEARBORN MI 48124

ROBT G WALKOWIAK MD
76 W ADAMS AVE
DETROIT MI 48226

SILAS W WALLACE MD L
7815 E JEFFERSON AVE
DETROIT MI 48214

ALBERT A J WALLAERT MD
941 BURNS
DETROIT MI 48214

JOHN P WALLER MD
32238 SCHOOLCRAFT
LIVONIA MI 48150

ALEXANDER J WALT MD
DETROIT RECEIVING HOSP
DETROIT MI 48226

ARTHUR W WALTER MD
7165 OLD MILL RD
BIRMINGHAM MI 48010

FLOYD J WALTER MD
18211 W 12 MILE RD
LATHRUP VILLAGE MI 48075

CHUN HENG H WANG MD
25350 DENNISON
FRANKLIN MI 48025

JOY YA HSIANG WANG MD
2020 MIDDLEBELT
GARDEN CITY MI 48135

JAMES N WARDELL MD
3414 MCDOUGALL
DETROIT MI 48207

BERNICE K WARREN MD
24111 SOUTHFIELD RD
SOUTHFIELD MI 48075

IRVING A WARREN MD
24111 SOUTHFIELD RD
SOUTHFIELD MI 48075

MAX W WARREN MD
23120 VALLEY CREST LN
SOUTHFIELD MI 48075

RICHARD A WASS MD
3815 PELHAM RD
DEARBORN MI 48124

HAROLD WASSERMAN MD
22341 W EIGHT MILE
DETROIT MI 48219

LEWIS C WASSERMANN MD
300 W MC NICHOLS RD
HIGHLAND PARK MI 48203

CHAS J WASZAK MD
26111 WOODWARD
HUNTINGTON WOODS MI 48070

ROBERT L WATLING MD
15761 ANDOVER DR
DEARBORN MI 48120

HARWOOD G WATSON MD
935 S MILITARY AVE
DEARBORN MI 48124

JAMES E WATSON JR MD
18524 GRAND RIVER
DETROIT MI 48223

FREDK B WATTS MD
16321 MACK AVE
DETROIT MI 48224

JOHN C WATTS MD
7360 12TH STREET
DETROIT MI 48206

JOS C WATTS MD
15901 W 9 MILE RD
SOUTHFIELD MI 48075

MORRIS A WAYNE MD L
15930 LIVERNOIS AVE
DETROIT MI 48221

ARTHUR W WEAVER MD
VA HOSPITAL
ALLEN PARK MI 48101

CLARENCE E WEAVER MD R
1260 SE FOURTH CT
DEERFIELD BEACH FL 33441

KARL W WEBER MD R
18101 E WARREN AVE
DETROIT MI 48224

JEREMY D WEBSTER MD
20045 MACK
GROSSE PTE MI 48236

JOHN E WEBSTER MD A
47 PINE COURT
DETROIT MI 48236

STEPHEN B WEBSTER MD
HENRY FORD HOSPITAL
DETROIT MI 48202

MILTON R WEED MD
1059 BERKSHIRE RD
GROSSE PTE PARK MI 48230

RICHARD S WEGRYN MD
661 WASHINGTON RD
DETROIT MI 48230

ALBERT M WEHENKEL MD L
3929 CHAUCER PL 602H
SARASOTA FL 33577

MAURICE B WEHR M D
2355 FORT STREET
LINCOLN PARK MI 48146

JOHN H WEIDNER MD
25701 JOY RD
DEARBORN HGHTS MI 48127

JOHN F WEIKSNAR MD
1800 TUXEDO
DETROIT MI 48206

ALLEN D WEINER MD
22341 W EIGHT MILE RD
DETROIT MI 48219

MAURICE B WEINER MD
20211 GREENFIELD
DETROIT MI 48235

DAVID WEINGARDEN MD L
15 ALGER PL
GROSSE PTE MI 48236

JACOB WEINSTEIN MD
4237 GRAND RIVER AVE
DETROIT MI 48208

BURTON H WEINTRAUB MD
15121 W MCNICHOLS RD
DETROIT MI 48235

A ALLEN WEISBERG MD
20 W SEVEN MILE RD
DETROIT MI 48203

HARRY WEISBERG MD
15101 W MC NICHOLS RD
DETROIT MI 48235

JACOB WEISBERG MD A
15101 W MC NICHOLS RD
DETROIT MI 48235

IRVIN I WEISENTHAL MD
5764 WOODWARD AVE
DETROIT MI 48202

CASIMIR P WEISS MD
10036 JOS CAMPAU
DETROIT MI 48212

ROBERT M WEISS MD A
1215 LAFAYETTE TWRS E
DETROIT MI 48207

FREDRICK WEISSMAN MD
20905 GREENFIELD RD
SOUTHFIELD MI 48075

MARTIN L WEISSMAN MD
15822 FAIRFAX
SOUTHFIELD MI 48075

JOHN H WELCH MD
18550 W OUTER DR
DEARBORN MI 48128

WILLIAM R WELHAF MD
22101 MOROSS RD
DETROIT MI 48236

HERSCHEL J WELLS MD
WAYNE CO GEN HOSP
ELOISE MI 48132

MARTHA L WELLS MD
584 PILGRIM RD
BIRMINGHAM MI 48009

GARY J O WELSH MD
3535 W 13 MILE RD
ROYAL OAK MI 48072

CARL G WELTMAN MD A
RR 2 SNEAD ISLAND
PALMETTO FL 33561

MILFORD E WENOKUR MD
26070 MEADOW DR
FRANKLIN MI 48025

JACOB F WENZEL MD
18555 E WARREN
DETROIT MI 48236

PETER P WERLE MD
62 GREENBRIAR LANE
GROSSE PTE SHORES MI 48236

WM J WERTZ MD
2405 W MCNICHOLS
DETROIT MI 48221

HOWARD G WEST MD
12739 PURITAN
DETROIT MI 48227

HOWARD J WEST MD
MT CARMEL MERCY HOSP
DEPT OF RADIOLOGY

DETROIT MI 48235

BERNARD WESTON MD
20403 SNOWDEN CT
DETROIT MI 48235

EARL E WESTON MD
18101 JAS COUZENS HWY
DETROIT MI 48235

HORACE L WESTON MD
15901 W NINE MILE
SOUTHFIELD MI 48075

RUSSELL F WEYHER MD L
111 HIGHLAND
DETROIT MI 48203

BURT T WEYHING MD A
18700 MEYERS RD
DETROIT MI 48235

NEIL J WHALEN MD L
1553 WOODWARD AVE
DETROIT MI 48226

THOS V WHARTON MD
1809 OAK ST
WYANDOTTE MI 48192

BRUCE T WHEATLEY MD
26451 RYAN ROAD
WARREN MI 48091

CHARLES E WHEATLEY MD A
4407 ROEMER
DEARBORN MI 48126

STEWART C WHEELER MD
18901 W MC NICHOLS RD
DETROIT MI 48219

JOS L WHELAN MD
28 W ADAMS AVE
DETROIT MI 48226

DONALD H WHITE MD
20685 MERIDIAN
GROSSE ILE MI 48138

JACOB E WHITE MD
3413 MCDOUGALL
DETROIT MI 48207

MILTON W WHITE MD
1439 E OUTER DR
DETROIT MI 48234

PROSPER D WHITE MD
58 W ADAMS AVE
DETROIT MI 48226

THEODORE M WHITE MD
7341 W WARREN
DETROIT MI 48210

LESTON S WHITEHEAD MD
1553 WOODWARD AVE
DETROIT MI 48226

WALTER K WHITEHEAD MD
17800 E EIGHT MILE RD
DETROIT MI 48236

FRED W WHITEHOUSE MD
2799 W GRAND BLVD
DETROIT MI 48202

ROBT K WHITELEY MD
608 EASTLAND PROF BLDG
DETROIT MI 48225

EDWARD H WHITELOCK MD
1809 OAK ST
WYANDOTTE MI 48192

JAMES E WHITMAN MD
3920 E EIGHT MILE RD
DETROIT MI 48234

ALFRED H WHITTAKER MD L
3 ELMSLEIGH LANE
GROSSE PTE MI 48230

JAMES I WHITTEN MD
14500 W MCNICHOLS RD
DETROIT MI 48235

HENRY E WIECHOWSKI MD
10345 JOSEPH CAMPAU
DETROIT MI 48212

ISRAEL WIENER MD
13011 W MC NICHOLS RD
DETROIT MI 48235

MORTON J WIENER MD
1253 TWIN MAPLES LN
BIRMINGHAM MI 48010

FRED K WIETERSEN MD
18700 MEYERS RD
DETROIT MI 48235

EDWARD S WIKIERA MD
15120 MICHIGAN
DEARBORN MI 48126

LESLIE F WILCOX MD
505 MIDDLESEX RD
GROSSE PTE PARK MI 48236

RUDOLF E WILHELM MD
751 S MILITARY RD
DEARBORN MI 48124

SEYMOUR K WILHELM MD
13011 W MC NICHOLS
DETROIT MI 48235

ARTHUR P WILKINSON MD R
615 N LAKESIDE DR
LAKE WORTH FL 33460

DELFORD G WILLIAMS MD
5050 JOY RD
DETROIT MI 48204

EARL R WILLIAMS MD
4407 ROEMER
DEARBORN MI 48126

EUGENE W WILLIAMS MD
6246 CHASE RD
DEARBORN MI 48126

JOHN H WILLIAMS MD
18633 MACK AVE
DETROIT MI 48236

JOSHUA S WILLIAMS MD
5050 JOY RD
DETROIT MI 48204

W A WILLIAMSON MD
2585 W GRAND BLVD
DETROIT MI 48208

WM A WILLOUGHBY MD
974 FISHER BLDG
DETROIT MI 48202

FREEMAN M WILNER MD
15001 W EIGHT MILE RD
DETROIT MI 48235

HARVEY I WILNER MD
HARPER HOSPITAL
DETROIT MI 48201

IRVIN A WILNER MD
17701 W MCNICHOLS RD
DETROIT MI 48235

ANDREW G WILSON MD
26711 SOUTHFIELD
LATHRUP VILLAGE MI 48075

FRANCIS M WILSON MD
DEPT OF MEDICINE
HUTZEL HOSPITAL

DETROIT MI 48201

GERALD S WILSON MD
3011 W GRAND BLVD
DETROIT MI 48202

MERTON C WILSON MD
15439 HARPER AVE
DETROIT MI 48224

PAUL H WILSON MD
901 W GRAND BLVD
DETROIT MI 48208

ROBERT F WILSON MD
DETROIT RECEIVING HOSP
DETROIT MI 48226

HELMUT WIMMER MD
1337 JOLIET PL
DETROIT MI 48207

HELEN H WINKLER MD
445 NEFF ROAD
GROSSE PTE MI 48230

LAWRENCE C WINNICK MD
13340 W 7 MILE RD
DETROIT MI 48235

GEO J WINTON MD
1150 GRISWOLD ST
DETROIT MI 48226

ROBT K WISE MD
17640 W 12 MILE RD
SOUTHFIELD MI 48075

EDWARD A WISHROPP MD L
20250 MACK
GROSSE PTE MI 48236

GRANT J WITHEY MD
719 NEW CENTER BLDG
DETROIT MI 48202

ARTHUR A WITTENBERG MD
7101 W CHICAGO BLVD
DETROIT MI 48204

C H WITTENBERG MD
1535 E STATE FAIR
DETROIT MI 48203

SAMSON S WITTENBERG MD L
18718 WOODWARD
DETROIT MI 48203

SYDNEY S WITTENBERG MD
4400 LIVERNOIS AVE
DETROIT MI 48210

JOS A WITTER MD
134 W UNIV DR #304
ROCHESTER MI 48063

MORRIS WITUS MD A
3140 S OCEAN DR #1505
HALLANDALE FL 33009

A J WLODARCZYK MD
1348 JOLIET PLACE
DETROIT MI 48207

JOHN N WOLFE MD
432 E HANCOCK
DETROIT MI 48201

MAX O WOLFE MD L
8120 E JEFFERSON
DETROIT MI 48214

STANLEY B WOLFE MD
18510 MEYERS RD
DETROIT MI 48235

BONNIE R WOLFRAM MD
620 NEW CENTER BLDG
DETROIT MI 48202

WM Q WOLFSON MD
3000 SEMINOLE
DETROIT MI 48214

JOSEPH WOLODZKO MD
32900 FIVE MILE RD
LIVONIA MI 48154

JAMES G WOLTER MD
MERCY HOSPITAL
PORT HURON MI 48064

MELISANDE WOMACK MD
1800 TUXEDO
DETROIT MI 48206

ALFRED L WOOD MD
23100 CHERRY HILL
DEARBORN MI 48124

DOUGLAS J WOOD MD
2860 CLARK AVE
DETROIT MI 48210

KENNETH A WOOD MD
3800 WOODWARD AVE
DETROIT MI 48201

WILFORD C WOOD MD L
3011 W GRAND BLVD
DETROIT MI 48202

RALPH F WOODBURY MD
21223 MACK
GROSSE PTE MI 48236

BERNARD J WOODLEY MD
3700 WEST RD
TRENTON MI 48183

ALBERT J WOODRING MD A
22700 ST JOAN
ST CLAIR SHORES MI 48080

JOSEPH J WOODS M D
2022 WASHTENAW RD
YPSILANTI MI 48197

FREDK M WORLEY JR MD
987 E JEFFERSON
DETROIT MI 48207

CALIER H WORRELL MD
20250 MACK
GROSSE PTE WOODS MI 48236

JOS J WORZNIAK MD
2312 BIDDLE AVE
WYANDOTTE MI 48192

WINSTON R WREGGIT MD
17 COLORADO AVE
HIGHLAND PARK MI 48203

CHARLES H WRIGHT MD
50 WESTMINSTER
DETROIT MI 48202

CLYDE YING CHAU WU MD
825 DAV WHITNEY BLDG
DETROIT MI 48226

RUDOLPH A WYATT MD
2785 S FORT ST
DETROIT MI 48217

JAN WYBRANOWSKI MD
17644 W WARREN
DETROIT MI 48228

ROBERT WYLIN MD
HARPER HOSPITAL
DETROIT MI 48201

RAYMOND L WYSOCKI MD
2536 RUTLEDGE
TRENTON MI 48183

JOSE E YANEZ MD
1400 CHRYSLER EXPWY
DETROIT MI 48207

RODOLFO YAPCHAI MD
3800 WOODWARD AVE
816 PROF PLAZA

DETROIT MI 48201

ARA YARJANIAN MD
3815 PELHAM RD
DEARBORN MI 48124

MORTON I YARROWS MD
455 MEDBURY ST
DETROIT MI 48202

ARTHUR J W YATES MD
16355 E JEFFERSON
GROSSE PTE PARK MI 48236

H G YESAYIAN MD L
609 KALES BLDG
DETROIT MI 48226

ROBT R YODER MD
20189 WHIPPLE
NORTHVILLE MI 48167

WM J YOTT MD
854 LAKESHORE RD
DETROIT MI 48236

DAVID J YOUNG MD
19820 PLYMOUTH ROAD
DETROIT MI 48228

DONALD A YOUNG MD A
132 CAMBRIDGE
PLEASANT RIDGE MI 48069

DONALD A YOUNG MD
132 CAMBRIDGE
PLEASANT RIDGE MI 48069

DONALD C YOUNG MD R
43875 NINE MILE RD
NORTHVILLE MI 48167

IRVING I YOUNG MD
3319 BLOOMVIELD SHORE
ORCHARD LAKE MI 48033

RICHARD D YOUNG M D
31500 SCHOOLCRAFT
LIVONIA MI 48150

SHUN-CHUNG YOUNG MD
15901 W 9 MILE RD #206
SOUTHFIELD MI 48075

VIOLA M YOUNG MD L
35743 EAST MICHIGAN
WAYNE MI 48184

WATSON A YOUNG MD
3508 HARRISON
INKSTER MI 48141

C S YOUNGSTROM MD
8004 LOCHDALE
DEARBORN MI 48127

LEONARD E YOVIS MD
28700 EIGHT MILE RD
FARMINGTON MI 48024

ERNEST G YUDASHKIN MD
10199 JERRIES
LAKELAND MI 48143

EDWARD J ZABINSKI MD
585 BALLANTYNE RD
DETROIT MI 48236

BURTON J ZACK MD
19190 GREENFIELD
DETROIT MI 48235

A T ZADEH MD
29911 W SIX MILE RD
LIVONIA MI 48152

LOUIS R ZAKO MD
7720 ALLEN RD
ALLEN PARK MI 48101

EDWARD J ZALESKI MD
4520 FIRESTONE
DEARBORN MI 48126

ALAN IRVING ZANE MD
7411 THIRD AVE
DETROIT MI 48202

SABAH E ZARA MD
15830 FORT
SOUTHGATE MI 48192

PAUL M ZAVELL MD
92 MORAN RD
GROSSE PTE FARMS MI 48236

SIGMUND G ZAWACKI MD
22146 FORD RD
DEARBORN MI 48128

JOS ZBIKOWSKI MD
31500 SCHOOLCRAFT RD
LIVONIA MI 48150

Z T ZBIKOWSKI MD
31500 SCHOOLCRAFT RD
LIVONIA MI 48150

MYRON R ZBUDOWSKI MD
10040 JOS CAMPAU AVE
DETROIT MI 48212

MICHAEL N ZELENOCK MD
15830 FORT
SOUTHGATE MI 48192

PETRAS ZEMAITIS MD
33000 PALMER RD
WAYNE MI 48184

JOS L ZEMENS MD
11420 E 9 MILE RD
WARREN MI 48089

SEYMOUR ZIEGELMAN MD
20905 GREENFIELD #700
SOUTHFIELD MI 48075

GEO H ZINN MD L
1553 WOODWARD AVE
DETROIT MI 48226

RICHARD M ZIRKIN MD
3105 CARPENTER AVENUE
DETROIT MI 48212

ELDRED ZOBL MD
15901 W 9 MILE RD
SOUTHFIELD MI 48075

MARGARET Z ZOLLIKER MD
289 MOROSS ROAD
GROSSE PTE FARMS MI 48236

L S ZUBROFF MD
760 FISHER BLDG
DETROIT MI 48202

WOLF W ZUELZER MD
5224 ST ANTOINE ST
DETROIT MI 48202

HENRY J ZUKOWSKI MD
72 N DEEPLANDS
DETROIT MI 48236

SIGMUND A ZUKOWSKI MD
1952 MANCHESTER
GROSSE PTE WOODS MI 48236

T S ZWIRKOSKI MD
25000 W 10 MILE RD
SOUTHFIELD MI 48075

MICHAEL K ZYLIK MD
RIVER DISTRICT HOSP
ST CLAIR MI 48079

HONORARY MEMBERS

C HALE BRAKE H

STANTON MICHIGAN 48888

WM J BURNS L L B H
RM 310 2190 SE 17TH ST
FT LAUDERDALE FL 33316

JOHN W CLINE MD H
3467 PACIFIC AVE
SAN FRANCISCO CAL 94118

PAUL DE KRUIF PH D H
WAKE ROBIN
HOLLAND MICHIGAN 49423

DONALD E JOHNSON H
718 HARRISON ST
FLINT MI 48502

E C CROSBY PHD H
MICHIGAN LEAGUE
ANN ARBOR MICHIGAN 48104

BRADLEY M PATTEN PHD H
2126 HIGHLAND RD
ANN ARBOR MICHIGAN 48104

REUBEN L KAHN DSC H
8 RUTHVEN PLACE
ANN ARBOR MICHIGAN 48104

LESTER P DODD H
1604 COMMONWEALTH BLDG
DETROIT MI 48226

MARK YOUR CALENDAR NOW!

FUTURE ANNUAL SESSION DATES

1971—Oct. 3-7, Grand Rapids
1972—Sept. 24-29, Detroit
1973—Oct. 7-11, Detroit
1974—Oct. 6-10, Detroit
1975—Oct. 5-9, Detroit
1976—Oct. 3-7, Grand Rapids

10 1338-B

THE LIBRARY
UNIVERSITY OF CALIFORNIA
San Francisco Medical Center
THIS BOOK IS DUE ON THE LAST DATE STAMPED BELOW

7 DAY LOAN

7 DAY
MAR 23 1972
RETURNED
MAR 22 1972
7 DAY
AUG 21 1972
RETURNED
BY MAIL 8/17/72
RETURNED
AUG 17 1972
7 DAY
DEC 13 1974

7 DAY
OCT 16 1972
RETURNED
OCT 18 1972
RETURNED
DEC 13 1974
7 DAY
AUG 2 1976
RETURNED
JUL 21 1976

7 DAY
NOV 9 1976
RETURNED
NOV 3 1976

25m-6,'69(J9513s4)4315—A33-9

5X

268180